

An exploratory investigation of the everyday musical experiences of adults and adolescents who have a visual impairment

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Abstract

This thesis explores the musical lives of adults and adolescents who have a visual impairment. It considers the various facets of their musical engagement including the functions fulfilled by music, beliefs regarding the importance of music in their lives, recorded listening experiences and the use of technology, and motivations and functions relating to live music event attendance. This thesis is the first to explore the wide-ranging experiences which make up the everyday musical lives of both musicians and non-musicians who have a visual impairment. The thesis offers a systematic investigation of this topic using mixed-methods and offers alternative perspectives to research which has focused on associations between visual impairment and heightened musical ability, or the musical experiences of children with visual impairments. This thesis also considers the potential challenges and barriers experienced by individuals who have a visual impairment in relation to musical engagement.

Three studies were undertaken. Qualitative data was gathered during focus groups, which informed the design of a series of semi-structured interviews. Interpretative phenomenological analysis provided the theoretical and analytical grounding for these interviews, allowing detailed exploration of the individuals' experiences. In turn, these interviews informed the design of a survey, which collected predominantly quantitative data. Questions were designed to explore salient topics identified in the previous studies, across a larger sample. Results highlight the central role that music played in the lives of many participants, with some suggesting an association between having a visual impairment and the importance of music. This was reflected in the range of functions fulfilled by music, some of which appeared to be unique to the needs of this group. For many, technology had impacted positively on musical engagement, however, results also demonstrated potential barriers to technological engagement for music listening. Similarly, participants enjoyed a range of music-making activities and engagement with live events, but challenges were also identified in relation to these experiences. Findings have important implications for the accessibility of music to individuals who have a visual impairment, for whom low vision, or changes to their vision, may negatively impact on their musical engagement. Furthermore, insight into the experiences of attendees who have a visual impairment at musical events offers a valuable contribution to the discourse surrounding the challenge of attracting and engaging members of underrepresented groups within arts audiences. Ultimately, this thesis provides a comprehensive exploration of the musical lives of adults and adolescents who have a visual impairment and identifies how access to music and musical experiences might be improved.

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1 Introduction

1.1 Overview of the current thesis

In existing literature, explorations of musical life for individuals with a visual impairment (VI) have tended to focus on quantitative measures or behavioural evidence of musicality, including explorations of heightened musical processing abilities in individuals who have a VI (Hamilton, Pascual-Leone & Schlaug, 2004; Voss & Zatorre, 2011) and the musical development of children who have a VI (Matawa, 2009; Pring & Ockelford, 2005). However, research has yet to consider the everyday musical experiences of the wider VI community and the range of activities and experiences which constitute their musical lives. This is despite evidence from existing research that music may have an important role to play in the lives of these individuals, as an important leisure activity, a means of meeting therapeutic goals, and a source of income (Baker & Green, 2017; Gillmeister & Elwafi, 2015; Hashemian, Mashoogh & Jarahi, 2015; Park, Chong & Kim, 2015; Peters, 2000).

An exploration of everyday musical life for individuals who have a VI is overdue for several reasons. Firstly, there is growing evidence of the negative psychological and psychosocial impacts of having a VI, particularly amongst those who experience sight loss later in life (Nyman, Gosney & Victor, 2010a; Zhang et al., 2013). In parallel, literature from the fields of music psychology and music therapy has highlighted music's role in reaching positive well-being outcomes in both clinical and non-clinical contexts (Macdonald, 2013). Exploration of the everyday musical engagement of individuals who have a VI will contribute to understandings of musical life in different subsets of the UK population, and contribute valuable knowledge to the discourse surrounding everyday musical life and well-being.

Secondly, literature suggests that for those living with a VI, participation in social and leisure activities may be more difficult than for their sighted counterparts (Horowitz, 2004). This group face challenges in relation to independent mobility, navigation in public spaces, and social interaction (Salminen & Karhula, 2014; Nyman, Gosney & Victor, 2010b; Williams, Hurst & Kane, 2013); this has obvious implications for engaging in recreational activities. With regards to music-related activities, research has shown that engagement with arts and cultural events tends to be lower amongst those with a VI than those with no disability, or a different type of disability (McManus & Lord, 2012). Music-making has also been shown to result in additional challenges for VI musicians, including those relating to notation, ensemble playing, and the use of music technology (Baker & Green, 2017; Coates, 2012). Similarly, music listening brings with it the potential for additional challenges for this group, particularly in relation to the prevalence of touchscreen technologies (McGookin, Brewster & Jiang, 2008; Williams, Alam, Ahamed & Chu, 2013). Furthermore, the generally limited uptake of new technologies amongst older users, and the high prevalence of VI amongst older adults, may

have implications for the use of technology for music listening amongst older individuals with a VI (Kuoppamäki, Taipale & Wilska, 2017; Neves, Amaro & Fonseca, 2013; RNIB, 2016a). Little is known about interactions with technology for musical engagement amongst this group, despite technology playing an increasingly important role in meeting goals relating to independent living and mobility in the lives of individuals who have a VI (Bhowmick & Hazarika, 2017; Hakobyan, Lumsden, O’Sullivan & Bartlett, 2013; Hersh & Johnson, 2010).

Finally, as a result of the aging population in this UK, the number of people living with a VI is expected to rise (RNIB, 2016a). Inclusion of older adults who experience late-onset sight loss in explorations of musical life will provide valuable insight into the experiences of this growing subset of the UK population, and highlight factors which might impact on participation in activities such as music listening, music-making and attending live events, and the well-being benefits associated with them (Croom, 2015; MacDonald, 2013; Packer & Ballantyne, 2010).

The current thesis offers the first exploration of everyday musical engagement across the wider VI community in music psychological literature. The research aims to explore the role that music plays in the lives of this group, the potential impact that a VI may have on engagement with, and access to, music. In doing so, this thesis contributes both to current understandings of the role of music in everyday life, focusing on the experiences of a group who have largely been absent from existing research, and addresses the topic of accessibility and inclusivity in relation to musical engagement and participation.

1.2 Structure of the thesis

In the following chapter, a review of three key areas of literature is provided, offering important contextualisation for the current thesis. This chapter first addresses the meaning and experiences associated with VI, before considering research exploring everyday musical life, including explorations of the role of technology in musical engagement, the functions of music, and live music experiences. Finally, literature which has explored associations between VI and musicality is considered.

In Chapter 3, I set out the aims of the current thesis and the research methods used to meet these aims. The chapter outlines the methodological considerations for the current project and provides details of the methods employed in each of the three studies. Chapter 4 is the first chapter to present findings from this investigation. The chapter describes Study 1, a focus group study which provided initial data relating to the research aims and highlighted key topics which required further exploration in subsequent studies. Chapters 5 to 9 describe findings from Study 2, a semi-structured interview study. These chapters progress through results from the study, offering detailed exploration of the various facets of participants’ lived musical experiences. Chapters 10 to 12 describe the final survey study. Chapter 10 outlines the methods

employed in the survey study and presents an overview of the sample. Chapters 11 presents data relating to everyday listening and technological engagement, whilst Chapter 12 focuses on the live music experiences of survey respondents.

Finally, Chapter 13 provides a general discussion of findings from all three studies, including an evaluation of the current project and considerations for future research. The chapter draws together findings from all three studies and considers what action might be taken to improve access to music and musical experiences for individuals who have a VI.

2 Literature review

This chapter contextualises the current thesis within three key areas of research. The first section, ‘Understanding sight loss’ provides insight into what it means to have a VI, including the certification process, and the psychological implications of VI. The next section, ‘Everyday musical experiences’ outlines key findings from the field of everyday musical engagement, including explorations of the role of technology in listening behaviours, and the psychological functions and well-being outcomes associated with music. This section also considers how the topics of technological engagement and live music attendance relate to the experiences of VI individuals. The third section unpacks associations between VI and musicality from a historical, neurological and behavioural perspective. The small amount of research which has explored the everyday musical experiences of individuals who have a VI is also outlined.

2.1 Understanding sight loss

The Royal National Institute of Blind People (RNIB) estimates that around 360,000 people are registered as blind or partially sighted in the UK (RNIB, 2014a). As a researcher exploring the musical lives of some of these individuals, it is essential to consider what existing research tells us about the experience of having a VI and what impact a VI may have on aspects of everyday life. The following sections consider the processes and terminology associated with VI and the certification process, before focusing on the psychological and social implications of VI.

2.1.1 *Visual impairments and categorisation*

According to the Department of Health (DoH, 2013), there is no legal definition of sight impairment, but a person can be certified as sight impaired if they are ‘substantially and permanently handicapped by defective vision caused by congenital defect or illness or injury’ (p. 10). The reason that there remains no legal definition may partly result from the complex and multi-faceted process of defining a VI as either a sight impairment (SI) or severe sight impairment (SSI). Numerous challenges arise in this categorisation process, including the distinction between monocular and binocular impairments, the implications of definitions based on presenting or best-corrected vision (with or without prescription glasses), and the continued disparity in the terminology used to describe VI (see Section 2.1.2 for a discussion of terminology used by different organisations). However, categorisation of a VI is typically based on visual acuity (VA) and field of vision.

The DoH (2013) identify VA as the primary indicator of the severity of a VI. VA relates to the quality of central vision possessed by an individual, specifically, the sharpness and level of detail with which objects are perceived (Goldstein, 2009). The Snellen test, consisting of rows of letters decreasing in size, has become an established tool for measuring VA (RNIB, 2016b).

VA is written in a two-figure form, which indicates a person's level of sight compared to a person with typical sight. The larger the second number, the worse a person's visual acuity, as this number represents the difference between typical VA and that of the person being tested (RNIB, 2016b). Those who are SSI will demonstrate VA of less than 3/60: at three metres, the individual cannot see what a typically sighted person can see at sixty metres.

In addition to VA, an individual may be certified as SSI if they demonstrate a VA higher than 3/60 (between 3/60 and 6/60) but possess severe reduction in field of vision (i.e. peripheral vision), or acuity of 6/60 or above with an even greater reduction in field of vision. An individual may be certified as SI if they demonstrate VA between 3/60 and 6/60, or up to 6/24 with a moderate reduction in field of vision or loss of quality of central vision. Furthermore, the DoH state that the subjective factor of whether an individual is 'handicapped' by their VI, and how recently their eyesight failed, may also be considered in the certification process. As such, the exact nature and impact of a VI on functional vision can vary greatly from one individual to the next. Classifications set out by international bodies (classifications from the World Health Organisation's International Classification of Diseases can be found in Appendix A) do not convey the heterogeneous nature of eye-conditions, nor the impact of factors such as education, and social and economic status on the experience of VI (Schinazi, 2007). Still, certification of a VI can be a useful step towards accessing services provided by local authorities to support those with a VI (RNIB, 2016b). Furthermore, for those who experience late-onset sight loss, receiving an official diagnosis may help individuals come to terms with, and make sense of, their VI (Thurston, 2010).

2.1.2 The challenge of nomenclature

Despite the centrality of the terms 'sight impaired' and 'severely sight impaired' in the classification process described above, there remains inconsistency in the use of phrases to denote the severity of a VI. For example, there is interchangeable use of 'blind' and 'severely sight impaired'. The term 'blind' remains in common usage, not only in the layman's discussion of sight loss, but also within medical or charitable organisations. For example, the Royal National Institute of Blind People remains just that, despite criteria for certification of a VI now resulting in either a certification of SSI (previously blind) or SI (previously partially sighted). Similarly, the form for certification of a VI in the UK still uses both terminologies (Royal College of Ophthalmologists, 2017). Whilst this may be necessary to clarify meaning for the patient or client, it does call into question which terminology is most appropriate within a research context.

In addition to terms used to describe the severity of a VI, there is inconsistency in the terms used to denote a VI itself. One problematic phrase is 'sight loss', a term which remains pervasive throughout publications of charitable and medical organisations (RNIB, 2013). The

main shortcoming of this phrase relates to its use as a generalised term for VI, despite its lack of universal applicability. To expand, for the term ‘sight loss’ to apply to an individual, they must have possessed sight at some point in their life. For many people who have lived without sight since birth, this term is inaccurate; there has been no physical or psychological process of losing their sight.

Distinctions must also be made between visual impairments dependent on age of onset. The term ‘congenital’ refers to an impairment that has developed before birth, during foetal development, during birth, or immediately following birth; thus, visual memory has not yet been established (Welsh & Tuttle, 1997). ‘Early-onset visual impairment’ (also ‘Early blind’) also refers to those who were born with a VI, but also incorporates those who lost their sight early on in life. However, there is little consensus regarding the age range to which this term applies. For example, Sadato, Okada, Honda and Yonekura (2002) categorised their sample of participants as early-onset if they were < 16 years of age, and late-onset if they were > 16 years of age. However, Sadato et al. (1998) categorised participants as early-onset only if they were VI from birth; those who lost their sight between the ages of 4 and 13 years were considered to have a late-onset VI. In contrast, Burton (2003) defines ‘late blind’ individuals as those who possessed sight at birth, who learned to read print, but who lost sight after the age of 12 years. The age range for which the terms ‘early’ and ‘late’ are applied is variable. Contrary to early-onset impairments, adventitious sight loss occurs in an individual who has been sighted previously, including those who experience a gradual loss of sight, and those whose vision loss was sudden or traumatic (Welsh & Tuttle, 1997). Adventitious sight loss may also be referred to as ‘Late-onset’ sight loss. The concept of adaptation becomes central to the experiences of those with this type of VI, as individuals must develop new means of carrying out everyday tasks. This is described by Welsh and Tuttle (1997) as a process of ‘unlearning’ techniques suited to the sighted individual and ‘relearning’ techniques more suitable for someone with sight loss (p. 68). This need for adjustment means that the psychological impacts of VI pose the greatest challenge for individuals with adventitious sight loss (Schinazi, 2007; Wahl, 2013).

2.1.3 Living with a visual impairment

Over the last two decades there has been a growing body of research which has sought to highlight the psychological and psychosocial impacts associated with having a VI (Huurre, 2000; Nyman et al. 2010a; Thomas Pocklington Trust, 2016). Du Feu and Fergusson (2003) highlight that there are distinct differences between the experience of early onset, sudden onset, or progressive impairments. The authors write that early onset of a significant sensory impairment can have a profound effect on a child’s development, with adverse consequences for mental health in childhood and adult life. In contrast, the sudden loss of a sense, due to illness or accident, can devastate a person’s life if appropriate support is not given, whilst a

mild but progressive loss may have a serious cumulative effect on a person's communication, confidence and independence (Du Feu & Fergusson, 2003). The impact of a VI may vary considerably dependent on the variable of time (Schinazi, 2007). Research has demonstrated that late-onset (adventitious) sight loss is associated with negative emotional consequences (Brennan et al., 2001; Nyman et al., 2010a; Senra et al., 2015). Symptoms of stress, depression, and anxiety have been reported as common effects of sight loss in adults (Zhang et al., 2013), and particularly elderly adults (Brody et al., 2001; Teitelman & Copolillo, 2005; Evans, Fletcher & Wormald, 2007; Rees et al., 2010; Tabrett & Latham, 2012). Whilst congenital VI necessitates an almost automatic acceptance of a condition, an adventitious impairment may result in feelings of surprise or trauma (Schinazi, 2007).

For those who experience adventitious sight loss, concerns regarding deteriorating vision, changes in functional ability, and perceived loss of autonomy may result in psychological stress (Heine & Browning, 2002; Horowitz, 2004; Mackay & Roy, 2002). An interview study by Kleinschmidt (1999) found that many participants reporting on their vision loss in late adulthood described emotional upheavals due to the limitations imposed by their VI, including fear, panic, shock, helplessness, and frustration. A review of research relating to VI in later life by Horowitz (2004) reported that psychological distress may stem not only from the impact of decreased functional vision, but also from impacts on engagement in valued leisure activities such as reading and driving. Research consistently highlights the role of maintaining an active leisure and social life in late-adulthood on psychological well-being (Betts Adams, Leibbrandt & Moon, 2011; Liffiton Horton, Baker & Weir, 2012; Paggi, Jopp & Hertzog, 2016; Silverstein & Parker, 2002). Given the association between VI and aging, research which explores the role of music in the leisure lives of this group is of importance.

Whilst levels of depression are generally higher in elderly adults than in younger individuals (Alexopoulos, 2005; Luppá et al., 2012), these rates are even greater in those living with sensory impairment (Capella-McDonnall, 2005; Hayman et al., 2007; Kiely, Anstey & Luszcz, 2013). A systematic review by Dawson, Mallen, Gouldstone, Yarham and Mansell (2014) concluded that people with Age-related Macular Degeneration (AMD) were more likely to experience symptoms of depression compared to those without AMD. Similarly, a study by Hayman et al. (2007) found that in a sample of older adults (≥ 75 years, $N = 391$) with VI, a large proportion (29.4%) had at least mild to moderate symptoms of depression. Findings indicated that both those who have a VI, and those who are physically disabled, are more likely to exhibit depressive symptoms than non-disabled older adults; the effect of VI was independent of the effect of physical disability. These results are useful in demonstrating not only the impact of VI on psychological well-being, but also the compounding effects that additional limitations to physical activity may have on well-being.

Less research has explored the incidence of depression in young and middle-aged adults with a VI, although existing research suggests that coping with age-related VI may pose more of a mental health risk in middle than in late adulthood (Boerner, 2004). Papadopoulos, Papakonstantinou, Montgomery and Solomou (2014) found that of 110 VI adults aged 18-56 years ($M= 33.47$ years, $SD= 11.26$), 23.5% showed symptoms of mild depression and 6.5% showed symptoms of moderate or severe depression. The authors note that individuals with depressive symptoms may even have been under-represented, due to the sample being taken from an association for the blind, for whom sight-loss support may mediate the negative psychological impacts of VI. This finding highlights the importance of considering the impact of VI across the adult age range. It should be noted that Papadopoulos et al. (2014) employed participants with both congenital and adventitious sight loss, failing to account for the possible mediating role of engagement with rehabilitation services and adaptation to impairment over time (Horowitz, Reinhardt & Kennedy, 2005; Ip, Leung & Mak, 2001). Reflecting this, Pfeiffer and Pinquart (2011), who provide a meta-analysis of studies comparing psychological well-being of VI individuals with non-VI control groups, note that a lack of detail provided by researchers regarding circumstances of sight loss makes it difficult to explore differences between the impact of sudden versus gradual, and congenital versus acquired VI. Details regarding comorbid conditions were also found to be inadequate which, given the established link between physical disabilities or long-term illness and lower levels of psychological well-being (Jones et al., 2014; Stevelink et al., 2014), is a significant limitation of this research.

In addition to emotional impacts of sight loss, research has found that VI may impact on aspects of social interaction (Heine & Browning, 2004; Nyman et al., 2010a; Teitelman & Copolillo, 2005). Communication breakdown, difficulty recognising people and an inability to pick up on non-verbal cues such as gesture and facial expression can make social interaction challenging (Girdler, Packer & Boldy, 2008; Heine & Browning, 2004; Mason & McCall, 1997; Stanford, Waterman, Russell & Harper, 2009). A focus group study by Girdler et al. (2008), which aimed to describe the impact of age-related VI on older adults (65-93 years, $M= 78$ years), highlighted the positive role of social support in adaptation to sight loss but also the difficulties experienced during social interaction. Participants felt that they were no longer able to follow established social norms and patterns of interaction, which limited their ability to make friends and reduced their confidence. Similarities can be seen here with research relating to the difficulties associated with social interactions for those who experience both hearing loss (Arlinger, 2003; Boi et al., 2011; Ciorba, Bianchini, Pelucchi & Pastore, 2012; Theunissen et al., 2011) and dual-sensory loss (Heine & Browning, 2002; McDonnall, 2009). Once again, the impact of additional disabilities on the lives of those who have a VI, including additional sensory impairments, is apparent.

Loneliness and isolation have become key concerns of medical and social care providers for individuals with sight loss (Hanson, Johnson, Percival & Zako, 2002; Heine & Browning, 2002; Hodge & Eccles, 2013; Saunders, 2005; Verstraten, Brinkmann, Stevens & Schouten, 2005). Alma et al. (2011) found that loneliness was present in a significantly higher number of VI elderly adults (50% incidence, $n= 173$), than in a typically sighted control group (29% incidence, $n= 173$). As with depression, age may be associated with loneliness, but VI can be seen to compound this potential issue. Thurston (2010) considers social connectedness to be one of four core areas where the emotional impact of sight loss is most apparent (along with mood, self-concept and feelings of loss) and research highlights the important role of social connectedness in adaptation to a VI (Verstraten et al., 2005; Nyman, Dibb, Victor & Gosney, 2012). A quantitative survey study by Bookwala (2011) found that, in a sample of 738 married older adults with a VI, relationship satisfaction and supportive spouse behaviour moderated the effects of poor vision on functional limitations and depressive symptoms. Positive and supportive relationships may be an important mediating factor in the experience of sight loss. As is apparent in the above discussion, much of the research surrounding the impact of VI on psychological and social well-being has focused on the experiences of older adults (typically aged ≥ 75 years) with late onset sight loss. However, considering the broad age range of participants involved in the current project, it is important to note that adolescents and young adults with a VI may also face additional communicative and psychological challenges.

Research with young people has typically been carried out in an educational context. Jessup, Bundy, Broom and Hancock (2017) employed experience sampling methodology (ESM) and interviews to investigate the social experiences of high school students who had a VI ($N= 12$). The study found that participants felt included at school (according to the Psychological Sense of School Membership questionnaire), although interviews revealed a lack of common ground between those with and without a VI. Also, for three participants, the presence of an additional disability impacted negatively on their sense of inclusion. Comorbidity may be an additional factor impacting on psychosocial well-being. Similar investigations have been carried out with university students (Almog, 2011; Hetherington et al., 2010). Research suggests that for students with more recent sight loss, a greater negative self-perception may be apparent (Mackay & Roy, 2002). Challenges associated with academic and social adjustment relating to the duality of being a student and a person with a VI, and tensions between feelings of independence and dependence, have also been identified (Almog, 2011).

Existing research provides useful insight into multiple aspects of educational life for individuals with a VI. However, it offers little exploration of everyday life and social experiences beyond educational settings, despite evidence that VI may impact on multiple aspects of daily living (Papadopoulos, Metsiou & Agaliotis, 2011). Papadopoulos et al.

(2011) found that children and adolescents with a severe VI ($N= 46$, 5-18 years) had difficulty with daily living skills such as domestic chores, self-care, and socialisation. Similarly, an interview study by Salminen and Karhula (2014) found that young persons with a VI ($N= 14$, 16-22 years) experienced barriers to participation in tasks relating to mobility, domestic life, relationships, and leisure. The difficulties experienced in relation to leisure activities is concerning when one considers the opportunities that these activities may offer young people for developing relationships and identity, and experiencing autonomy (Jessup, Cornell & Bundy, 2010). To date, little research has considered the role of specific leisure activities in the lives of young people with a VI. Research which explores such activities could offer greater understandings of the challenges faced by this group and means of better supporting their participation. Explorations of the role of music may be of particular relevance, given the importance that music has been shown to have in the lives of many young people (North, Hargreaves & O'Neill, 2000; Papinczak, Dingle, Stoyanov, Hides & Zelenkob, 2015).

2.2 Everyday musical experiences

The literature discussed in the following sections progresses through several topics relating to everyday musical engagement, a term which is defined in this thesis as any self-chosen experience or behaviour which features music. The 'everyday' facet of these experiences relates to both the range of contexts in which music is experienced, and the focus of the current research on the musical experiences of both musicians and non-musicians. The discussion below outlines key research within the field of everyday musical engagement and implications of current knowledge on explorations of the musical lives of individuals who have a VI.

2.2.1 Everyday musical engagement

Research has explored various facets of everyday musical life and has sought to document the exact nature, context and function of these experiences (Greasley & Lamont, 2011; North, Hargreaves & Hargreaves, 2004; Sloboda, O'Neill, & Ivaldi, 2001). Research highlights variability in musical engagement: individuals engage in different types of musical activities, invest different amounts of time and money, and use music to achieve a variety of different goals (Caldwell, MacDonald, Duncan, & Thompson, 2009; Greasley & Lamont, 2006, 2011).

Whilst musical engagement has previously been associated with musical training and musicianship, research has taken an increasingly broad view of this concept (Chin & Rickard, 2012; Herbert, 2011). This has included a growing recognition of the range of listening experiences which now typify musical engagement for many people (Lamont, Greasley & Sloboda, 2016) and considerations of various musical experiences (e.g. listening, playing, training, and functions of music) in measures of musical engagement (Chin & Rickard, 2012). Chin and Rickard's (2012) Music Use Questionnaire (MUSE) views musical engagement along

a spectrum of ability and sophistication through considerations of both the quality and quantity of musical experience. Müllensiefen, Gingras, Musil and Stewart (2014) also recognise the multi-faceted nature of musical engagement in their index of ‘musical sophistication’. This index was constructed to measure the musical engagement of general populations across seven subscales: Active Engagement, Perceptual Abilities, Musical Training, Singing Abilities, Emotions, and General Sophistication. As such, it incorporates both musical expertise and experience and can be applied to individuals with varying levels of formal musical training. In addition to highlighting the multidimensional construct of musical behaviour, Müllensiefen et al. (2014) explored associations between psychological and socio-economic factors and musical sophistication. Findings showed that musical sophistication was related to the personality traits openness to experience and extraversion, and to the socio-economic factors of occupation, education, and wealth. Such research provides insight into the variability of musical engagement across general populations of Western societies, and the multiple factors impacting on this facet of everyday life. However, it provides little insight into the lived musical experiences of participants, or their decision-making surrounding musical engagement. Furthermore, whilst the impact of various individual differences has been explored, considerations of disability, health, and illness have typically been overlooked, despite evidence that these factors may negatively impact on engagement with music (Section 2.2.3.1 considers the impact of disability on engagement with live events), and are related to socio-economic factors which may also limit engagement (see Section 2.2.1.1, below).

2.2.1.1 Socio-economic factors and musical engagement for individuals with a visual impairment

As discussed above, socio-economic factors have been associated with musical engagement (Müllensiefen et al., 2014). These factors may also be of importance to discussions of VI and musical engagement. Whilst a full exploration of the socio-economic issues associated with VI is beyond the bounds of this thesis, it is important to observe that for this group, financial factors may play a role in decisions relating to engagement with both live and recorded music.

Slade, Edwards and White (2017) report that only one in four registered blind or partially sighted people of working age is in employment, and for those who are completely blind, this figure drops to around one in 10 people. Furthermore, Saunders (2014) found that almost three-quarters of people with sight loss (73%) had a total personal income of less than £300 per week, compared with 53% of people with no impairment (after controlling for age and sex). These figures have obvious implications for the economic freedoms available to those who have a VI. With regards to musical engagement, research has highlighted the financial costs associated with cultural engagement (Arts Council England, 2014; Marsh et al. 2010), and research exploring the barriers and motivations for attending live music events has found cost

to be an important consideration or potential barrier to attendance (Brown & Knox, 2017; Earl, 2001; Pitts, 2014, 2016). The purchase of recorded music and playback devices may also be considered a costly financial investment (Coyle, Gould, Gupta & Gupta, 2009; Earl, 2001; Greasley, 2008; Luck, 2016). Whilst literature highlights the impact that technological advances have had on access to music, often at little or no cost to the listener (Lamont et al., 2016), subscription services, physical copies of recorded music, legally sourced digital downloads and playback devices require financial commitment. In light of evidence that individuals who have a VI are often at an economic disadvantage compared to people with other types of disability, and people with no disability (Saunders, 2014), it is surprising that research has yet to consider how cost, and wider issues of accessibility, may impact on the musical engagement of these individuals. This is even more concerning given findings from McManus and Lord (2012), who reported that just 19% of participants ($N= 37,000$) with a VI were attending arts activities as much as they would like, compared to 31% of participants who had no impairment. This figure raises important questions regarding barriers to attendance of cultural events for individuals who have a VI.

2.2.1.2 Technology and changing listening behaviours

There has been increasing recognition within music psychological literature of the impact that technological developments have had on the relationship between music and listener (Avdeeff, 2012; Brown & Sellen, 2006). The evolution of digital technologies has altered the creation, distribution and consumption of music, making it more accessible to a greater number of people than ever before (Ayers, 2006; Avdeeff, 2012; Taylor, 2001). In general, research has shown a growing culture of eclectic or omnivorous listening behaviours, characterised by the consumption and appreciation of all genres, driven by access to a wide range of styles, opportunities to sample music at no cost and purchase single tracks rather than albums, and functions such as shuffle and playlists which encourage eclectic listening (Avdeeff, 2012; D'Arcangelo, 2005; Greasley, Lamont & Sloboda, 2013; Peterson, 1992; van Eijck 2001).

Despite this growing digitalisation of music, research suggests that materiality continues to shape consumer practices (Magaudda, 2011), reflected by the recent increase in sales of vinyl records (Ellis-Petersen, 2017). Bartmanski and Woodward (2016) write that, 'Vinyl has experienced the rebirth of its cool. It is a cultural icon' (p. 3). Indeed, stats from the British Phonographic Industry's 2018 report show that 4 million vinyl LPs were purchased in the UK in 2017, accounting for one in ten physical music purchases. Qualitative interviews carried out by Magaudda (2011) suggest a variety of reasons for the rise in popularity of vinyl records, including the use of vinyl and turntables in widespread contemporary consumption contexts, a sense of lost meaning and value in the digital musical experience, and use of vinyl to experience a different relationship with music. Similarly, Bartmanski and Woodward (2016)

observe that in comparison to the routine convenience offered by technological convergence of functions (e.g. smart phones), vinyl maintains the offer of ritual immersion (e.g. professional turntable). Rather than portability, vinyl is judged by its aesthetics, and as Maguadda (2011) suggests, its ability to retain, or perhaps redeem, lost meaning and cultural value. As such, whilst music consumption has largely shifted from tangible to intangible forms, musical material objects (such as physical collections) still play a relevant and, for some individuals, greater role in music consumption practices today (Maguadda, 2011).

2.2.1.3 Technology for musical engagement of visually impaired users

Exploration of the technologies used for musical engagement by individuals with a VI has, thus far, been lacking. This is despite the growing array of research which has explored the benefits that developments in technology, including mobile technologies and specialist assistive technology, has provided in various aspects of these individuals' lives (Hakobyan et al., 2013; Bhowmick & Hazarika, 2017). This includes developments of mobility, orientation and travel aids, improved access to books, documents and written information, aids for daily living, and the use of technology to improve accessibility in employment, education and recreational contexts (Hersh & Johnson, 2010). It is useful to consider the research which illuminates the challenges and barriers associated with technology which may be used to engage with music.

For VI users, different technologies bring with them their own set of benefits and challenges (Patch, Spellman & Wahlbin, 2018). For those using a smartphone, potential challenges might include screen size, issues of colour and contrast on the screen, touchscreen gestures, positioning of content within apps or webpages, and text entry (Patch et al., 2018). However, smart phones offer a degree of portability, and range of functions, which have made these devices popular amongst VI users; smart phones have, for example, become an important navigational support, offering access to an integrated GPS, accessible schedules, and assurance in their capabilities as an independent traveller (Kane, Jayant, Wobbrock & Ladner, 2009).

Central to discussions of technological engagement for individuals with a VI is the distinction made between 'mainstream' and 'assistive' technology. The RNIB define assistive technology as enabling someone with a disability to access information or mainstream technology independently (RNIB, 2018a). Assistive technology includes specific devices for use by blind or partially sighted people, such as Braille notetakers and embossers. In the current thesis, this term refers to these specific devices and does not include adaptive technology (add-ons such as screen reading software, magnification software and refreshable braille displays for use with mainstream devices). This distinction reflects the findings of McGookin et al. (2008) who explored the accessibility of touchscreen technology and found that chosen technologies of VI users were divided between specially designed assistive technologies and appropriated mainstream devices. To take an example from music listening, this could be the choice between

a specialised radio which offers a large display and tactile buttons, such as the Duet 2 (available through Amazon), or a mainstream radio which offers similarly easy-to-use functions. It should be noted that the Duet 2 is priced at £210.00, whilst a similar mainstream product from Roberts, the ‘Roberts Play 10’, costs just £37.99 (both prices include VAT and are correct as of June 2019). McGookin et al. (2008) observe that use of assistive technologies and mainstream technologies is not necessarily an either-or decision. As the authors point out, many participants used both types of technology, with one offering a means of overcoming the limitations of the other, whether these be associated with cost or other issues of accessibility.

One of the most notable developments of recent decades has been touchscreen technology. This technology has become increasingly common since its inception as a feature of the first touchscreen mobile phone in 1992 (Spinfold, 2014) and its incorporation into Apple’s iPod Touch, launched in 2007 (Apple, 2007). Touchscreens are now a common-place feature of MP3 players, phones, tablet PCs, and laptops. However, they pose a barrier to accessibility for VI users (McGookin et al., 2008; Williams et al., 2013). Numerous studies have considered ways of overcoming this barrier, exploring the option of overlaid buttons and direction-based gestures (El-Glaly, Quek, Smith-Jackson & Dhillon, 2013; Kane, Morris, & Wobbrock, 2013). The integration of Braille-based technologies (Kocielinski & Brzostek-Pawlowska, 2013; Southern, Clawson, Frey, Abowd & Romero, 2012), and tactile feedback has also been considered (Jansen, Karrer & Borchers, 2010; Xu, Israr, Poupyrev, Bau & Harrison, 2011). However, as Kane et al. (2013) observe, such technologies are not widely available beyond the research lab and at present, it is built-in accessibility features such as speak-screen and Siri which allow VI users the greatest level of accessibility.

For those hoping to avoid touchscreens when accessing music, the availability of basic devices with buttons has decreased dramatically. Technology journalist Schofield (2018) writes:

You would think there would be a huge market for cheap, easy-to-use MP3 players suitable for blind and visually impaired users, and for older users whose fingers are not as nimble as they used to be. If there is, suppliers don’t appear to be addressing it. (Schofield, 2018)

It is notable that Apple announced in 2017 that it would discontinue its iPod shuffle, which requires no interaction with a screen, and its iPod Nano, which offered a click wheel with some audio feedback in its earlier models, and accessibility software (spoken menus or VoiceOver software) in its later models (Gibbs, 2017). This announcement leaves the iPod Touch as Apple’s only single-function music-player still in production (Apple, 2018a). However, as mentioned above, many touchscreen devices offer built-in accessibility software; individuals simply need to alter the accessibility settings on their device (Kane et al., 2013). Apple’s iOS and Google’s Android operating systems allow users to give voice commands, and provide screen reading software which enables them to navigate a touchscreen using tactile input and

audio output (Kane et al., 2013). Individuals with some remaining functional vision may also benefit from the magnification, colour, contrast and font settings which can be manipulated to make a screen easier to see (Apple, 2018b; Google, 2018).

In addition to portable devices, a range of technologies are available for music listening in the home. These include the continued availability of devices such as radios and HiFi systems, but also the development of interconnected speaker systems, Bluetooth enabled devices, and digital assistants (smart speakers). Thus far, the impact of such technological developments on the listening behaviours of individuals with a VI has yet to be explored in academic literature, but the potential impact of smart technology on access to information and media has not gone unnoticed. An article published by the RNIB (RNIB, 2017) lists several functions of smart speakers which may be of use to a VI user, including easy access to news, alarms, and audiobooks. It remains to be seen how such devices, which may offer users new and easier ways of accessing music, might impact on the musical engagement of individuals with a VI.

2.2.2 Functions of music

A vast amount of literature has explored the reasons why individuals choose to engage with music, and the impact that music may have on aspects of psychological functioning (Lamont et al., 2016; North et al., 2004; Schäfer, Sedlmeier, Städtler & Huron, 2013; van Goethem & Sloboda, 2011). A common approach within this field has been the uses-and-gratifications approach, which aims to explain how and why individuals select music, and other media, to serve a variety of needs (North et al., 2000; Chin & Rickard, 2012). Research has identified a range of functions which typically fall within the broad categories of cognitive, emotional, social, and physiological or arousal-related functions (Schäfer et al., 2013; Sloboda et al., 2001) and has consistently shown the impact of factors such as age, personality, and gender on musical engagement (Rentfrow, 2012; Rentfrow & Gosling, 2003). For example, both Chamorro-Premuzic and Furnham (2007) and Chamorro-Premuzic, Swami and Cermakova (2010) found associations between Neuroticism and emotional uses of music, and between Openness to experiences and cognitive uses of music. Research has also demonstrated the impact of personality on musical preference. Bonneville-Roussy, Rentfrow, Xu and Potter (2013) found that Extraversion is associated with a liking for contemporary styles, and Conscientiousness is associated with a liking for Unpretentious music and a dislike for Intense styles. The same study found that age may also influence musical preferences, with liking for Intense and Contemporary styles decreasing with age and liking for Unpretentious and Sophisticated styles increasing with age.

2.2.2.1 Music and psychological well-being

Research provides growing evidence of the efficacy of both music listening and music-making in promoting positive well-being outcomes amongst clinical and non-clinical populations (Macdonald, 2013; Västfjäll, Juslin & Hartig, 2012). Macdonald (2013) writes that even informal music listening may have significant positive effects upon well-being, whilst in clinical and palliative settings, music has been used to support psychologically vulnerable groups including adults with dementia (Ridder, Stige, Qvale & Gold, 2013; Wall & Duffy, 2010; Ueda, Suzukamo, Sato & Izumia, 2013), individuals with mental health conditions (Gavrielidou & Odell-Miller, 2017; Solli, Randi & Borg, 2013) and those living with a terminal illness (Horne-Thompson & Grocke, 2008; O'Callaghan, Dun, Baron & Barry, 2013).

A review carried out by Croom (2015) concluded that musical practice and participation may impact positively on all areas of well-being, influencing positive emotions, engagement in life, relationships, the meaning found in life, and feelings of accomplishment (PERMA). Both therapeutic and non-therapeutic musical participation has been found to offer individuals opportunities to develop a sense of achievement (Baker & MacDonald, 2013; Creech, Hallam, McQueen & Varvarigou, 2013b; O'Callaghan et al., 2013) and for older people, opportunities to develop self-identity, connect with others, and experience spirituality (Hays & Minichiello (2005). Laukka (2007) also found that music was a frequent source of positive emotions and a means of meeting needs relating to emotions, identity, belonging, and agency in older adults.

Amongst adolescents, links have been found between emotional well-being and both emotional experiences with music, and social congruence in musical tastes with parents and friends (Miranda & Gaudreau, 2011). Saarikallio and Erkkilä, (2007) suggest that for these individuals, music-related emotional experiences may play a role in psychosocial development.

The literature outlined above is by no means a comprehensive review of research exploring the relationship between music and well-being, but it does demonstrate the variety of activities and contexts in which music has been used to meet positive well-being outcomes.

2.2.3 Live music events

In general, there has been a shift away from live music, towards private recorded listening experiences (Frith, 2007; Sanjek & Sanjek, 1991). Reflecting this, Greasley and Lamont's study (2011), which employed ESM, found that for 25 participants over seven days, 75% of 291 musical episodes involved recorded music, whilst only 4% involve live music. It is important to note that participants in their study were all aged 18-30 years, so findings do not offer a representative view of musical activity across all age groups. However, Bunting, Chan, Goldthorpe, Keaney and Oskala (2008) have reported low levels of engagement in live music across the adult age range. When asked about their attendance at live events, 91% of 28,117

adult respondents (aged 16 years and above) attended 'Little if anything', 5% attended 'Now and then' and only 3% were 'Enthusiastic' attendees.

Despite figures outlined above, Frith, Brennan, Cloonan and Webster (2013) maintain that live music still plays an important role in the lives of music listeners. Reflecting this, a growing body of research has explored the motivations and perceived benefits of attending live music events (Ballantyne, Ballantyne & Packer, 2014; Dobson, 2010; Packer & Ballantyne, 2010; Pegg & Patterson, 2010). Exploring the motivations for attending an international classical music festival, Dikmen and Bozdağlar (2013) found that some of the most important factors were the availability of free tickets (indicating the influence of cost), festival reputation, the ability to explore new things and meet new people, and having opportunities for family togetherness. Wide-ranging motivations were also identified by Brown and Knox (2017) in relation to pop concert attendance. Their study analysed open-ended questionnaire responses from 249 participants (112 male, 137 females, $M = 26.49$ years) and identified four key reasons for attendance: 'Experience', whereby concerts offer a unique, one-off experience, 'Engagement', through which the social facet of attendance was expressed, 'Novelty', which highlighted the importance of the unknown aspects of live performances, and 'Practical' factors, which included potential barriers to attendance such as distance to travel and time limitations. Just one participant reported cost of tickets as a limiting factor to attendance, suggesting that for participants in their study, the event offered an experience which individuals were willing to pay for. In contrast, a phone survey by Hager and Winkler (2012) found that the cost of travel and familiarity with venue were both potential barriers to attendance at performing arts events. Expanding on the concept of cost, Pegg and Patterson (2010) highlighted the importance of 'Value for money' in the motivations of 1,320 visitors to a country music festival.

In addition to the potential impact of practical factors such as cost, travel arrangements and geographic location, research has also drawn associations between socio-economic class or status and arts consumption, with a general trend towards lower levels of arts engagement for those of a lower social class (DiMaggio & Useem, 1978; Katz-Gerro, 2002; Kraaykamp, van Eijck & Ultee, 2010). Bunting et al. (2008) found that factors such as education and social status may impact on level of arts attendance, although their report also suggested that arts attendance is driven less by general economic circumstances, and more by the social groups of potential attendees. Thus, identity may be a more important factor than socio-economic status. Similarly, Chan and Goldthorpe's (2006) secondary analysis of survey data gathered by the 2001 Arts in England Survey found that musical consumption is more closely associated with social status and education than with social class. However, findings from studies described above suggest that financial cost and the concept of value-for-money remains an important

consideration for some. In the case of music festivals, a market report by UK Festival Awards (2017) found that music festivals may incur a large cost to attendees, with 29% of 8000 respondents from the survey spending £50-£100 before a festival, excluding the cost of tickets, and 26% spending £50-£100 during the festival. This report also found that an increase in ticket price was cited as the most important factor influencing whether respondents would return to a festival the following year.

Despite potential barriers to attendance, live music events have been found to offer opportunities for active musical engagement, immersion in a unique musical and social environment, and the thrill of physical proximity to performers and other attendees (Bowen & Daniels, 2005; Packer & Ballantyne, 2010; Pitts & Burland, 2013). Research suggests that live events provide audience members with the opportunity to feel like part of a community (Gibson & Connell, 2005; Pitts, 2005; Pitts & Burland, 2013). Radbourne, Johanson, Glow and White (2009) found that for attendees of theatre productions and concerts, being part of an audience was one of the main attractions of attending. Live event attendance has also been associated with well-being outcomes. Packer and Ballantyne (2010) identified four facets of the music festival experience, which were associated with well-being outcomes for young people: the 'Music experience', the 'Festival experience' (e.g. atmosphere and anticipation), the 'Social experience', and 'the Separation experience' (an escape to a new environment removed from everyday expectation and routine). Given evidence of the central role music plays in the lives of young people, these findings suggest that live music could play a role in fostering social and psychological well-being in this group (Bahanovich & Collopy, 2009; Miranda, 2013; North et al., 2000). Exploring the well-being benefits of arts attendance more generally, Johansson, Konlaan and Bygren (2001) considered the benefits of cultural attendance on self-reported health in a longitudinal study which compared interview data from 3793 adults (25-74 years) gathered 8 years apart. Results suggested that those who were less culturally active by the second interview, or were culturally inactive at both times of interview, were at increased risk of impaired perceived health compared to those who were culturally active at both times of interview. However, the measure of health used in the study was rudimentary, based on responses to the question, 'How would you describe your general health?'. Participants responded 'good', 'poor', or 'somewhere between good and poor'. The two latter responses were interpreted as indicators of perceived poor health. A measure which accounted for the various aspects of physical and mental health may have been of greater value.

It is important to note that research also acknowledges the possible negative outcomes of live music attendance, such as risks relating to alcohol and drugs, overcrowding and mob behaviour (Earl, Parker, Tatrai, & Capra, 2004; Earl, Parker & Capra, 2005; Kim, Lee & Sirgy, 2016; Nordvall, Pettersson, Svensson & Brown, 2014). Issues such as these may be of importance to

attendees who have a VI, for whom concerns relating to personal safety, resulting from navigating in unfamiliar surroundings, interacting with strangers, and using technological devices in public, may be even greater than for sighted individuals (Williams et al., 2013; Yau, McKercher & Packer, 2004). Furthermore, despite the benefits of live event attendance outlined above, there has been a decline in audience numbers within the arts (Pitts, 2014). In relation to classical music, researchers have begun to address the challenge of declining attendees by exploring the perceptions and experiences of non-attenders (Dobson, 2010; Roose, 2008). Dobson and Pitts (2011) explored the experiences of first-time attendees at classical music concerts using qualitative methods. Results suggested that social aspects of the experience, including feeling included, were mediated by participants' perceptions of their own, and others' levels of knowledge. Participants emphasised the need for accessible information in order to feel able to appreciate the music; this may have implications for VI attendees, for whom accessing information may be a source of concern. In order to attract a new student audience to the London Symphony Orchestra, Gosling, Crawford, Bagnall and Light (2016) investigated the use of a mobile app ticketing system. The app was not notably successful; most newcomers already listened to recorded classical music and/or were persuaded to attend by a friend. Minor adjustments to promotion and ticketing was not adequate in solving the challenge of attracting members of this underrepresented group. Expanding on this issue of under-representation, the following section focuses on literature which has considered the attendance of disabled individuals at arts event, or lack thereof.

2.2.3.1 Engagement and experiences of disabled attendees at arts events

Jancovich (2017) observes that despite the rights granted in the United Nations' Universal Declaration of Human Rights that 'everyone has the right freely to participate in the cultural life of the community, to enjoy the arts', there has been a growing concern that participation in the arts is not universal. In the UK, there has been an increasing amount of research exploring participation in the arts, including the impact of socio-demographic factors such as ethnicity, gender, age, and health on arts attendance (Hager & Winkler, 2012; Keaney, 2008; Manolika, Baltzis & Tsigilis, 2015). This has included work carried out by public bodies such as UK Arts Councils (Bunting et al., 2007, 2008) and charities such as Attitude is Everything. Research has consistently found associations between having a disability and lower levels of arts attendance (Hull, 2013; Kempe, 2015). Bunting et al. (2007) found that over a one-year period, adults with a limiting illness or disability were less likely to attend arts events and participate in arts activities than those with no disability, or a non-limiting illness or disability. However, a subsequent report suggested that when other factors, including social status and health, are held constant, disability status has little or no significant additional effect on arts attendance (Bunting et al., 2008). Bunting et al. (2008) draw attention to the need for research to explore

socio-demographic factors as interrelated, in order to identify which factors might have the greatest impact on arts attendance. Björkegren (2018) found that arts engagement in 2016/17 for those with a disability was at its highest level recorded in the UK (75.7%), although engagement for this group was still lower than for those without a disability (80.2%).

Hull (2013) collated findings from numerous studies providing data on ticket sales, barriers to attendance, and audience experiences in Northern Ireland. This report found that substantially fewer people with disabilities attended the arts in 2012; 59% of disabled people reported having attended an event that year, compared with 87% of people without a disability. Keaney and Oskala (2007) found that for elderly people, socio-demographic factors such as gender and disability were predictors of arts engagement, including attendance at music events such as operas, classical concerts and jazz performances. Furthermore, survey data suggested that attendance rates of adults with a limiting disability or illness fell faster with age than those of adults with no limiting disability or illness; the influence of social-economic background, health, and disability became more pronounced with age. As discussed above, individuals who have a disability, including those with sight loss, tend to have lower incomes than their non-disabled counterparts (Keaney & Oskala, 2007; Saunders, 2014). Solutions to increasing arts attendance for this group may need to address both physical barriers to accessibility and potential financial barriers which may be linked to lower household income.

Progress has been made over the last decade to highlight and minimise barriers to arts attendance. Kempe (2015), for example, highlights the success of *The Relaxed Performance Project*, in offering children with Autism spectrum disorder opportunities to enjoy live arts in a supportive audience environment (Include Arts, 2018). However, findings from The UK Live Music Census 2017 (Webster, Brennan, Behr, Cloonan & Ansell, 2018), suggest that whilst venues and organisers may be aware of challenges faced by disabled attendees, addressing their needs requires greater action than is currently being taken. 90% of respondents to their promoter survey (completed by individuals on behalf of promotional companies for events) considered accessibility essential or desirable when booking venues, but 47% of respondents from the venue survey and 86% of respondents to the promoter survey had not received Disability Awareness training. Furthermore, only 7% of respondents to the promoter survey reported a standard policy to provide subsidised personal assistant tickets for Deaf and disabled attendees, which fails to address potential financial barriers to attendance for these individuals.

Work by UK charity Attitude is Everything has highlighted several challenges relating to live event attendance for deaf and disabled attendees. The charity's 2016 report highlighted a lack of online access information (35% of venue and festival websites provided no access information), difficulties finding this information online (often hidden in FAQ pages) and variability in the availability of accessible parking dependent on venue size (larger venues

being more likely to offer Blue Badge parking). The charity's 2018 report focused on the experience of booking access provisions, drawing on data from 349 deaf and disabled respondents. Findings showed a marked improvement in booking experiences compared to 2014 (Attitude is Everything, 2014) and yet, 4 out of 5 respondents had experienced problems during the booking process, 79% had been put off buying tickets due to these difficulties, and 73% had felt discriminated against when trying to book accessibility provisions. For VI respondents (just 9% of respondents), difficulties relating to the inaccessibility of websites when using magnification or screen-readers, including the challenge posed by pictures, advertisements and tables, were cited. The report also found that the misuse of accessibility phonelines by non-disabled people at times of high demand impact on the booking experiences and opportunities to access tickets for deaf and disabled customers.

The work of Attitude is Everything indicates that progress towards accessibility has been made. When asked if they felt that the situation for deaf and disabled customers when booking accessibility provisions had changed in the last four years, 37% of participants believed that the situation had improved (Attitude is Everything, 2018). However, 37% believed that the situation had stayed the same, and 9% believed that the situation had worsened. There are still improvements to be made to the accessibility of live events for deaf and disabled attendees. It is also noticeable that the experiences of VI attendees have, thus far, gained limited attention. There is a need to explore the motivations for attending events and the potential barriers and concerns experienced by these individuals in order to achieve truly accessible events.

2.3 Visual impairment and musicality

As suggested by literature outlined above, the everyday musical engagement of individuals with a VI, including the use of technology for music listening, and live music experiences, have yet to be fully explored. However, a small amount of research has considered the musical experiences of this group. In the sections that follows, literature which has drawn associations between VI and musical life is considered, progressing through three main areas of research: firstly, longstanding associations between VI and musicality and explorations of what Baker and Green (2017) describe as traditions of blind musicianship; secondly, research evidencing links between VI and musical ability, including a discussion of the concept of cross-modal plasticity; and finally, the small amount of research which has specifically explored the musical experiences of individuals who have a VI.

2.3.1 Folklore and media representations

Within musical traditions from a variety of countries and cultures, blind musicians have held a unique position within society (Groemer, 2012; Kononenko, 1998). Traditions of blind instrumentalists and singers are evident in the musical histories of both Japan and the Ukraine

(De Ferranti, 2009; Groemer, 2012; Johnson, 2006). Furthermore, exploitative notions of blind musicianship are evident in the blues tradition of the Southern states, with the success of numerous VI musicians of whom many had the description 'Blind' replace or precede their name (e.g. Blind Willie Nelson, Blind Lemon Jefferson and Blind Blake). Baker and Green (2013) suggest that these worldwide traditions of blind musicianship have framed the way that society views VI people's musical participation; the success and prominence of blind musicians has offered anecdotal evidence of associations between VI and musicality.

The framing of disability within the media may have also influenced society's perceptions of VI and musicality. Barnes (1992) highlights how the media can create inaccurate representations of disabled people, portraying those with a VI as, 'visionaries with a sixth sense or extremely sensitive hearing' (p. 12). Barnes' observation that media representations of disability focus on 'triumph over tragedy' holds true for several VI musicians (p. 13). The summary from Brown's (2010) biography of Stevie Wonder reads, 'Blind since infancy, Wonder didn't let his disability define him, instead learning many musical instruments and developing his unique musical style'. Similarly, the description of Andrea Bocelli's autobiography (2001) states 'behind this man's extraordinary success lies a story of personal triumph more dramatic than any opera... Not only did he overcome his sight loss to qualify as a lawyer, but continued to pursue his childhood dream to sing'. The emphasis here on the extraordinary achievements of a few VI musicians could be seen to contribute to societal beliefs regarding the musical abilities of VI people. Baker (2014) cites the existence of such publications as evidence of society's interest in the relationship between musicianship and VI. Finally, the presence of VI individuals in music-related professions may have influenced associations drawn between VI and musicality. In the UK, there is a long tradition of blind piano tuners, and until the restructuring of the Royal National College for the Blind in the late 2000s, piano tuning was a popular vocational course at the college (University and College Union, 2008). Referencing this tradition, Bailey (2005) suggests that VI individuals have, in the past, been 'forced by bad luck and bad advice' into so-called blind trades, such as piano tuning and massage (para. 3). However, this critical view may overlook the influence of various interrelating factors. Baker (2014) suggests that the existing prominence of blind musicians in a variety of contexts, the perceived relationship between blindness and musicality that persists within the sighted community, and encouragement from parents, may result in a VI individual pursuing a musical career. Two participants in the research of Baker (2014) commented that they started to learn musical instruments because this was something believed to be achievable for them. Similarly, within a historic context, Hirose (2003) writes that for the Biwa-hōshi, one of the traditions of blind musicianship in Japan, no alternative means of making a living was

available to these VI individuals. It is perhaps not surprising that beliefs relating to music as an accessible occupation for individuals with a VI persist (Baker, 2014).

2.3.2 Cross-modal plasticity, auditory processing, and musical abilities

In addition to historical and societal associations between VI and musical life, research has sought to provide neurological and behavioural explanations of associations between VI and the development of musical ability. Much of this research has considered the possible role of cross-modal plasticity, the phenomenon that occurs when a modality-specific brain area that is deprived of its normal sensory input becomes responsive to stimulation of other modalities in the development of these skills (Kujala et al., 2000). There is evidence of this adaptation in individuals with a VI relating to speech and language processing (Bedny, Pascual-Leone, Dravida & Saxe, 2012; Röder, Stock, Bien, Neville & Rösler et al., 2002), tactile acuity (Norman & Bartholomew, 2011), and auditory processing tasks including auditory discrimination, localisation and speech processing (Chen, Zhang & Zhou, 2006; Collignon, Voss, Lassonde & Lepore, 2009; Gougoux et al., 2004; Hugdahl et al., 2004; Röder et al. 1999; Rokem & Ahissar, 2009). There is also evidence that skills relating to pitch discrimination may be enhanced in those with a VI. Gougoux et al. (2004) found that those with an early-onset VI (age of onset 0-2 years) are better at judging the direction of pitch change between sounds, even when the speed of change is ten times faster than that perceived by sighted controls. Similarly, Voss and Zatorre (2011) found that early-blind participants performed significantly better than sighted participants on a pitch discrimination task in which subjects were instructed to determine whether two melodies were identical or different. The authors also provided neurological grounding for these results, reporting that thickness of the occipital cortex in VI individuals was significantly correlated with higher scores on auditory task performance.

It should be noted that evidence of the development of these skills in those with late onset VI is less clear, and the proposal of a critical age of onset for cross-modal plasticity is a common theme in neurological literature (Marabet & Pascual-Leone, 2010; Newport, Neville & Bavelier, 2001; Sadato et al., 2002). However, some research has suggested that neural reorganisation can occur later than this so-called critical period (Hölig, Föcker, Best, Röder & Büchel 2014a, 2014b). Voss et al. (2004) reported that both participants who had early (before 11 years, $n= 14$) and late-onset VI (after 16 years, number not reported) developed greater auditory spatial abilities than sighted participants. Both congenital and late onset VI may be associated with neural reorganisation and subsequent heightened auditory processing abilities, of which some may be related to the processing of musical input.

One common area of exploration in this field has been the prevalence of Absolute Pitch (AP) amongst those with a VI (Hamilton et al., 2004; Dimatati, Heaton, Pring, Downing & Ockelford, 2012). AP is a distinct cognitive ability to identify pitches of the Western musical

scale without external reference, which is possessed by one in 10,000 people (Deutsch, 2013; Takeuchi & Hulse, 1993). An exploration of AP in VI musicians by Hamilton et al., (2004) found that of the twenty-one participants with congenital VI who were either a professional or amateur musician, 12 (57.1%) self-reported having AP. Similar findings were reported by Dimatati et al. (2012), who explored AP in a group of children with congenital VI ($n= 12$) and a sighted control group ($n= 15$). The group of children with a VI scored significantly better on a pitch naming task than the children in the sighted control group.

Hamilton et al. (2004) provide evidence of distinct neurological differences in the pitch processing of sighted and early-blind musicians, which could offer some explanation for the greater level of AP-related skills in individuals who have a VI. Results from magnetic resonance imaging found great variability in planum temporale asymmetry in a group of VI musicians who reported AP ($n= 12$) which contrasts the increased left-sided asymmetry typically demonstrated in sighted musicians with AP (Keenan et al., 2001; Loui, Zamm & Schlaug, 2012; Wilson, Lusher, Wan, Dudgeon & Reutens, 2009). This suggests that neural processes underlying AP in VI musicians may differ from those in sighted musicians. Further support for this claim is provided by Gaab, Schulze, Ozdemir and Schlaug (2006) who observed distinct differences in brain activation in a VI and sighted musician with AP while performing pitch categorisation and identification tasks.

Whilst AP may be associated with musical ability (*cf.* the associations found between AP and proficiency in musical dictation in the research of Dooley & Deutsch, 2010) it is important to note that AP is not a comprehensive indicator of an individual's musicianship, nor their interest in, or engagement with, music. Research which explores musical engagement and the importance of music to those who have a VI is considered below.

2.3.3 Music in the lives of individuals with visual impairments

To date, there has been little exploration of the everyday musical engagement of individuals who have VI. However, existing research suggests that, for both children and adults who have a VI, music may have an important role to play in everyday life.

2.3.3.1 Childhood

Pring and Ockelford (2005) suggest that there may be a natural emphasis on music from the care-givers of children with VI, particularly in the context of communication. It is perhaps not surprising, therefore, that existing literature suggests that music may play an important role in the lives of these children. Pring and Ockelford (2005) explored behavioural measures of the musical interests, abilities and provision for children with septo-optic dysplasia (a condition affecting early eye and brain development). In the study, parents of children with severe VI reported much higher levels of musical ability in their children than those reported by parents

of children who were fully-sighted or who had a less severe VI. Also, 100% ($n= 16$) of parents of children with severe VI reported that their children were interested in music, ‘a lot’, whilst only 38% ($n= 12$) of the 32 parents of sighted children reported this level of interest; there was a significant difference between the groups. Whilst parental reports may be subject to bias, findings suggest that musical ability may be greater in children with severe VI. Reflecting this, Matawa and Ockelford (Matawa, 2009; Ockelford & Matawa, 2009) investigated the impact of VI, resulting from Retinopathy of Prematurity (RoP), on the development of musicality in children. Results of their parental questionnaire and case studies suggested that, once again, music may be more important to children with a VI; there was a high level of importance attributed to music by parents, large amounts of time spent engaging in music were reported, and most suggested that their child had a ‘special talent for singing’. Furthermore, Matawa (2009) reported that of the 37 children who had RoP, 18 possessed characteristics of AP, which may suggest some impact of this condition on the development of music-related abilities. It should be noted that many of the children in the study had additional special educational needs, which may have influenced engagement with music.

Research relating to the therapeutic use of music in the lives of children with a VI has also tended to focus on the experiences of those with additional educational needs, although a small number of studies have evidenced the successful use of music therapy interventions for children with a VI alone. Positive impacts have included improving communication skills and reducing isolation (Arter & Hill, 1999; Gourgey, 1998; Pring & Ockelford, 2005), providing an auditory and tactile environment in which to develop sensory awareness (Gillmeister & Elwafi, 2015), and reducing stereotypical behaviours such as rocking or head-swinging (Kern & Wolery, 2001, 2002).

2.3.3.2 Adolescence

As with the literature relating to music in the lives of children with a VI, there has been limited exploration of the musical lives of adolescents with a VI. Existing literature has tended to focus on the experiences of those with additional educational needs and has often considered the experiences of children and adolescents as a homogenous group (Desrochers, Oshlag & Kennelly, 2014; Martino & Bertolami, 2014). However, a small amount of research has explored this topic. Hashemian et al. (2015) successfully employed a music therapy intervention to reduce aggressive behaviour in teenagers with a VI. The authors state that living with a SSI during childhood may lead to immature, inappropriate behaviours, and increased aggression. The intervention consisted of twelve weekly 90-minute sessions (seven students per group), using folk songs with traditional instruments (santour, flute and guitar). Pre- and post-tests showed that following the intervention, aggression scores were significantly lower. Music therapy has been used to reduced aggression in a variety of sub-populations, including

individuals with dementia (Ridder et al., 2013; Wall & Duffy, 2010) and sighted children and adolescents (Choi, Lee & Lee, 2010; Fernández, Vázquez & Ferreiro, 2014). In an exploration of the leisure activities of eight SSI young people, Jessup et al. (2010) found that music provided a means of building and maintaining friendships through musical participation, constructing positive identities, and a sense of achievement. Hodges and Keller (1999) suggest that music can provide a bridge over which to develop relationships for VI college students, supporting literature which has identified music as playing a key role in the development of social identity and relationships during adolescence (North et al., 2000; North & Hargreaves 1999; Selfhout, Branje, ter Bogt & Meeus, 2009).

For children and adolescents who have a VI, both everyday musical engagement and music therapy has been found to result in positive social and psychological outcomes. However, the use of music therapy in this context is an underdeveloped field (Metell & Stige, 2015). Similarly, a systematic exploration of the functions and meaning of music in everyday life for young people with a VI is missing from the literature.

2.3.3.4 Adulthood

Literature suggests that for adults with a VI, music may be employed as a therapeutic tool to improve functioning in non-musical areas such as sensory, motor, social and emotional development (Peters, 2000). However, once again, research has tended to focus on the experiences of those with additional disabilities (Christie, 1992; Cooke, Moyle, Shum, Harrison & Murfield, 2010; Donald & Pinson, 2012) and little research has considered the non-therapeutic musical experiences of adults with a VI.

Two studies have focused on the musical career paths of individuals with a VI. The research of Jacko, Cobo, Cobo, Fleming and Moore (2010) offers insight into the potentially fulfilling careers that VI individuals may have in musical production, providing a training plan that may be implemented to enable these individuals to acquire the skills that lead to employment in the music production industry. The authors observe that many individuals with a VI have experienced lucrative careers in the music industry as performing artists but, in contrast, literature on the training of individuals who have a VI for careers in music production is limited. The paper highlights the positive impact that technological advances and accessibility software have had on increasing the number of opportunities in music production and the authors suggest that this field may be one in which VI and sighted individuals can develop equal proficiency. It is notable that the authors put such emphasis on the accessibility of music production to individuals with a VI, when figures reported by the Saunders (2015) suggest that occupations associated with music are not in particularly high occurrence amongst individuals with a VI in the UK. Of the jobs reported by 282 individuals with a VI, only three related to a musical field: classical guitar teacher, peripatetic teacher, and piano tuner/technician.

The work of Baker and Green (2017) explored the musical careers and experiences of VI musicians worldwide. Questionnaire data and in-depth interviews with both amateur and professional musicians provided insight into the musical practices, participation, and experiences of these individuals. Findings showed that VI musicians were engaged in music-making in a much more diverse range of styles than expected by the researchers, who predicted that these musicians would be primarily involved in genres or activities that relied less heavily on print notation than aural transmission (e.g. traditional styles, pop, or jazz). Findings also highlighted the role of technology in creating various ways to learn, create and share music, although difficulties were raised relating to accessing specialist information, the rapid release of software, variability in the accessibility of applications, and exclusion from work in mainstream studios due to unfamiliar or inaccessible technology.

In comparison with the experiences of individuals with a VI in musical occupations, the everyday musical lives of the wider VI community has received little attention. Park et al. (2015) offer a quantitative exploration of musical life for VI adults in Korea. A 30-question survey was designed to compare the attitudes and uses of music by adults with and without a VI ($N= 137$). Participants rated their agreement with statements relating to their personal attitudes to music (e.g. music helps me express my thoughts and emotions), interpersonal attitudes (e.g. music helps me create a closer relationship with others), communal attitudes (e.g. music is the best tool for communal unification) and the use of music in daily life. VI participants had significantly higher scores for the three categories combined, and analysed individually, ratings were significantly higher for this group on the interpersonal and communal attitudes measure. There were also notable differences in the amount of time spent using music for leisure. The majority of VI participants (25%) indicated that they spent most of their leisure time (40%-70%) involved with music, whilst the majority of sighted participants (33%) engaged with music during only 10%-40% of their leisure time. These findings suggest that music may have an even greater role to play in the lives of VI adults than those with sight, and that the social and communal aspects of music may be of great importance to this group.

Park et al. (2015) offer the first exploration of musical life for non-musicians with a VI, although the study does have some limitations. Firstly, the sample was aged 20-39 years, which fails to represent the full adult age range. Secondly, the study explored the experiences of just 63 VI participants (and 74 sighted participants). This sample size is relatively small considering recruitment was carried out through several organisations, including the Korea Blind Union. Finally, care must be taken when drawing generalisations from the study. The experience of sight loss is mediated greatly by factors such as social support and rehabilitation services, which are likely to differ between countries (Bookwala, 2011; Horowitz, Reinhardt & Boerner,

2005). This may result in diverse variations in the everyday experiences of VI individuals worldwide.

2.4 Summary of the literature

This chapter has contextualised the current thesis within three key areas of literature. Firstly, it outlined literature which addresses definitions, characteristics, and the classification of VI, and has explored the experiences of living with a VI. This section highlighted a number of essential considerations for the current study, including the different experiences associated with VI dependent on age of onset, the importance of adaptation to sight loss in those who experience a late-onset VI, and the greater risk of negative psychological consequences for this group. Secondly, this chapter discussed literature relating to everyday musical engagement, and considered the implications of existing research on understandings of musical experiences for individuals who have a VI. This section highlighted the role of music in fulfilling everyday psychological functions, the impact of technological developments on musical engagement, and the experiences associated with live event attendance. Discussion suggested that for individuals with a VI, there may be several potential barriers to engagement with music, including the cost of technological devices, music services and event tickets, the sometimes-limited accessibility of mainstream devices, and high cost of specialist assistive technology. However, the discussion also suggested that technology has become increasingly accessible to VI users, for example, built-in accessibility features have helped to overcome barriers to touchscreen technology use for this group. Continued technological developments also raise questions regarding access to, and knowledge of, new music listening technologies for this group. Finally, this chapter considered associations between VI and musical life. Literature which draws on historical, neurological and behavioural evidence of these associations was outlined. This literature suggested that music may be of particular importance to those who have a VI. However, as highlighted throughout this chapter, there has been little exploration of the range of musical activities and experiences associated with musical life for the wider VI community. Consideration of the role of music in the lives of this group, across the adult age range (≥ 16 years), their use of technology for musical engagement, and their experiences of live events, are largely absent from music-psychological literature. This thesis provides new data in this area. Attempts to understand the experiences of this group are particularly important as the number of people living with a VI is predicted to rise due to the aging population and subsequent rise in age-related eye diseases (Gohdes, Balamurugan, Larsen & Maylahn, 2005; Sinclair, Ryan & Hill, 2014).

3 Methodology

This chapter sets out the methods used in the current thesis, opening with a description of the aims and research questions, and the methodological considerations for the project. This includes a discussion of procedures used in previous research on the topic of VI and musical life, use of a mixed-methods approach, and the theoretical underpinnings and ethical considerations of the current research. The chapter also describes the specific methods employed during data collection and data analysis for each of the three studies carried out.

3.1 Research aims and questions

As discussed in Chapter 2 there has been little exploration of the various facets of musical life for individuals who have a VI. The current research is guided by three broad aims, and several research questions. These aims acknowledge both the range of everyday musical experiences documented in existing literature and address the potentially unique experiences which may be associated with musical engagement for individuals who have a VI.

1. To explore the musical lives of adults and adolescents with a visual impairment

- What functions does music fulfil in the lives of individuals who have a VI?
- What technologies are individuals with a VI using to access music and how accessible do VI users find this technology?
- What musical events do individuals with a VI attend and what are their experiences of these events?
- What types of music-making activities are individuals with a VI involved in and what functions does music-making fulfil for this group?

The first aim addresses the lack of existing research exploring musical life for individuals with a VI. As Section 2.3 highlights, existing research has focused on the musicality of those who have a VI, rather than their everyday musical experiences, and has tended not to consider the experiences of non-musicians. Some research has explored the musical engagement of those who have a VI, although much of this research has focussed on the experiences of children. This is despite evidence that there is a far greater prevalence of sight loss amongst adults than children (RNIB, 2016a). Park et al.'s (2015) study offers some similarities with the aims of the current study, such as explorations of the importance of music and functions of music in the lives of individuals who have a VI, but as discussed in Section 3.3.4, their study was limited by sample age range and was lacking in any detailed exploration of the musical activities carried out by participants. The current project will be the first to explore these aspects of everyday musical engagement for adults and adolescents who have a VI in the UK.

2. *To consider the impact that a visual impairment may have on access to music and musical experiences*
 - Do individuals with a VI face any challenges when accessing and listening to music at home?
 - How might a VI impact on an individual's music-making experiences?
 - For individuals who have VI, what factors influence decisions to attend live music events? Are these factors the same as those considered important by sighted attendees?
3. *To identify, where appropriate, means of improving access to music and musical experiences for individuals who have a visual impairment*
 - What sources of technological support and information are currently available to assist individuals who have a VI when accessing music at home? How might this group be better supported to engage with new and alternative technologies?
 - What access provisions are available to VI attendees at live events and in what ways might access be improved for these individuals?

The second and third aim of the current project are interrelated, with a view to identifying potential challenges associated with accessing music and musical experiences as a VI individual and proposing ways that these challenges might be overcome. The project aims to consider challenges that may occur in relation to various aspects of musical engagement, including accessing information about music, use of online music services and technology, making-music, and attendance at live events. Literature outlined in Chapter 2 (Sections 2.2.1.3 and 2.2.3.1) highlighted that despite evidence that this group may face challenges when using technology and attending cultural events, there is a current lack of data regarding these activities in relation to musical engagement. The project's exploration of live music event attendance expands on the work of UK charity Attitude is Everything, who have explored the accessibility of live music events for deaf and disabled people, through its explicit consideration of the experiences of those individuals who have a VI.

The third aim of the project is to identify, where appropriate, ways in which challenges might be overcome. This information may be of value and interest to numerous groups, including the wider community of people with VI, those in care roles or service providers for these individuals, event organisers, venues, policy makers, and technology developers.

3.2 Methodological considerations

3.2.1 Previous methods of exploring visual impairment and musical life

As highlighted in Chapter 3, VI has been associated with music within both historical literature and empirical research, from ancient global traditions of blind musicianship, to empirical studies which have compared musical processing abilities in musicians with and without VI.

Historical accounts and empirical evidence both suggest the presence of an association between having a VI and either possessing enhanced musical abilities, an increased musical interest, or a gravitation toward musical endeavours and careers (Baker & Green, 2017; Hamilton et al., 2004; Ockleford & Matawa, 2009; Voss & Zatorre, 2011). Literature discussed in Chapter 1 shows that others have begun to explore the topic of everyday musical life for individuals who have a VI, but this small pool of literature offers limited insight into the experiences of the wider VI community (Park et al., 2015; Pring & Ockleford, 2005). Some research has offered insight only into the lives of a very specific and small sample of individuals. Ockleford and colleagues, for example, focused on the musical experiences of children who have a VI as a result of specific conditions such as Septo-Optic Dysplasia and Retinopathy of Prematurity. This limitation is also present in the work of the quantitative survey carried out by Park et al. (2015) whose sample had an age range of just 20 to 39 years. Furthermore, whilst their research design was an effective means of comparing easily quantifiable measures of musical engagement, such as the amount of music listening carried out for leisure, no qualitative data was collected. Qualitative data could have provided further insights into participants' attitudes towards music and factors which might impact on musical engagement.

In response to the limitations of previous research, the current project will explore the everyday musical experiences of adolescents and adults with a VI, seeking insight into the topic across a wider age range than has previously been explored. The research expands on the work of Baker and Green (2017), with their focus on the experiences of VI musicians, through its exploration of everyday musical life for the wider VI community. The research will pursue a comprehensive representation of the musical lives of participants through its employment of mixed-methods. Qualitative techniques will gather in-depth and contextualised data about musical life, whilst quantitative techniques will develop a broader picture of musical engagement across a wider subset of the population. Building on the methods of Park et al. (2015), the survey employed in Study 3 quantifies aspects of musical engagement, but the limitations of these methods for gaining a comprehensive understanding of the musical lives of participants is recognised. By exploring multiple facets of musical engagement and providing opportunities for participants to offer answers beyond a tick-box selection, both through 'Other' categories where appropriate, and open-ended responses, this method is a valuable tool for exploring the topic at hand. This will be the first systematic investigation of the everyday musical lives of both musicians and non-musicians who have a VI. A discussion of this mixed-methods approach is provided below, and a more detailed account of the specific methods employed in each of the three studies can be found in Section 3.4.2.

3.2.2 Qualitative, quantitative and mixed-methods

Historically, purist advocates of quantitative and qualitative research paradigms have argued for the superiority of their chosen paradigm as a means of approaching inquiries within the social sciences (Johnson & Onwuegbuzie, 2004; Lincoln & Guba, 2005). As Johnson and Onwuegbuzie (2004) describe, the century-old ‘paradigm wars’ have resulted from a stark contrast in beliefs regarding how social science research should be carried out, and the nature of knowledge which should be, and can be, sought (p. 14). Quantitative purists have occupied a positivist standpoint, believing that scientific knowledge is the epitome of rationality and must be ‘free of the interests, values, purposes, and psychological schemata of individuals’ (Howe, 1988, p.13). Within this paradigm, social observations are treated as entities equivalent to physical phenomena, detached from time and context; the focus of research is on reliably and validly determining the causes of social scientific outcomes through objective investigation (Johnson & Onwuegbuzie, 2004). In contrast, the beliefs of the qualitative purists are best understood as a rejection of this positivist paradigm and an acceptance of interpretivist philosophies (Howe, 1988). Such an approach does not consider time- and context-free generalisation as desirable, nor possible, due to the subjectivity of human experience and the research process itself (Johnson & Onwuegbuzie, 2004). According to Bresler (1996), within the qualitative paradigm, reality is viewed as a human construction, shaped by cultural and personal influences.

The above descriptions of the qualitative and quantitative paradigms suggest fundamental differences in beliefs regarding how research should be carried out, and to what end. Howe (1988) writes that in believing that their paradigm is the ideal for carrying out research, members of both parties are implicitly, if not explicitly, accepting what he describes as the ‘incompatibility thesis’ (Howe, 1988). This theory postulates that qualitative and quantitative research methodologies and their theoretical underpinnings are irreconcilable and, as such, cannot and should not be mixed (Johnson & Onwuegbuzie, 2004). Incompatibilists cite ‘hidden epistemological difficulties’ of combining the competing positivistic and interpretivist paradigms that supposedly underlie quantitative and qualitative methodologies (Howe, 1988, p. 10). However, Howe (1988) argues that no incompatibility exists between the methods, either at the level of practice or epistemology. As Hanson (2008) writes, ‘The differences between qualitative and quantitative methods in sociological research are more apparent than real... This suggests that the debate is political rather than theoretical or philosophical.’ (p. 97). Others have argued similarly that the incapability of the two approaches have been over-exaggerated and have proposed a move away from either-or-dualism, towards a continuum which promotes pragmatism and reconciles these opposing viewpoints (Feilzer, 2010; Mayoh & Onwuegbuzie, 2015; Morgan, 2007; Teddlie & Tashakkori, 2009). Reflecting this, Gorard (2010) describes the qualitative/quantitative divide as an unhelpful binary which fails to recognise the

similarities shared by the approaches. In one example of this, Gorard (2010) observes that the distinction between qualitative work as subjective and quantitative work as objective is exaggerated by members of both parties, observing that all analytical techniques are restricted by data gathering methods, input data, or by sample size. Furthermore, most methods of analysis use some form of number; even a qualitative description which uses words such as ‘tend’, ‘most’, ‘all’, ‘typical’, ‘great’ or ‘related’ is referring to numeric claims (Gorard, 2010). Reflecting the above support for a pragmatic approach, the current thesis takes a similar view to that of Biesta (2010), who suggests that pragmatism breaks down any hierarchy between positivism and constructivism in order to look at what may be meaningful and valuable in both paradigms.

Johnson and Onwuegbuzie (2004) cite several other similarities between the qualitative and quantitative approaches. These include the use of empirical observations to address research questions, the description of data and construction of arguments from data, and speculation about why observed outcomes occur. Regardless of paradigmatic underpinnings, all research in the social sciences attempts to produce knowledge about human beings and the environments in which they live (Johnson, Onwuegbuzie & Turner, 2007). Researchers must consider when each research approach is most helpful and meaningful, and when and how they should be mixed or combined to conduct more effective research (Gorard, 2010; Johnson et al., 2007)

Demonstrating the value of combining methods, Matawa (2009) employed both questionnaire (gathering a mix of quantitative and qualitative data) and case study techniques (consisting of observations of children’s music making and interviews with parents) in an exploration of the musical interests and abilities of VI children with Retinopathy of Prematurity. In the study, questionnaire techniques offered a means of constructing a broad overview of the research topic at hand, highlighting commonalities across the children involved in the research and providing insight into easily quantifiable measures of musical engagement such as time spent engaging with music and the number of instruments played. However, the follow-up case studies completed for three of the children provided valuable supplementary insight into their musical lives, including the opportunity to observe musical activity in context, to consider the children’s musical development from birth (as described by parents), and to demonstrate the individuality and variety of musical experiences of each child. As such, a mixed-methods approach offered a level of comprehensiveness which would have been difficult to achieve using a single method. The current research considers the qualitative and quantitative paradigms as valuable counterparts, not rivals, in the construction of knowledge.

3.2.3 Advantages of employing mixed-methods in the current research

There are several reasons why mixed-methods are appropriate for the current project. Here, I refer to three advantages of combining qualitative and quantitative research identified by

Bryman (2016). Firstly, in line with the concept of ‘Completeness’, a mixed-methods approach allows the creation of a more comprehensive account of the topic, as the gap left by one method is filled by the other (Bryman, 2016). Mixed-methods have been utilised in research exploring the experiences of individuals with VI, as a means of developing a comprehensive view of participant experiences of specific phenomena. For example, the research of Hodge, Barr & Knox (2010) used both quantitative and qualitative methods in their exploration and evaluation of emotional support and counselling for those who have a VI. Quantitative questionnaire data was used to generate a comprehensive picture of the overall development and use of services in the UK; comparisons were also made between groups based on factors such as age and geographic location. In contrast, interviews were used to explore service users’ experiences in more depth, allowing individuals to describe their experiences in their own words. In both the research of Hodge et al. (2010) and the current study, the relatively small amount of existing research relating to the research topic makes this qualitative data of even greater value to understanding the experiences of VI individuals.

In the current research, mixed-methods allows both in-depth exploration of individuals’ personal experiences through qualitative data collection, and the opportunity to explore the experiences of a wider cross-section of the VI population through quantitative data collection. Collection of quantitative data provided the opportunity to revisit and expand on salient topics identified during the quantitative studies, offering a more complete understanding of the musical experiences of this subset of the population, and greater opportunities for generalisability of findings. Denzin (1978) describes this methodological approach as between-methods triangulation, which allows for one of three outcomes: convergence, inconsistency, or contradiction of results. Any of these three outcomes mean that the researcher is better able to construct a complete explanation of the phenomena under investigation (Denzin, 1978).

Perhaps most significant in research exploring the topic of musical life from a phenomenological perspective is the ‘Context’ which Bryman (2016) considers mixed-methods approaches to provide. As Bryman (2016) highlights, data gathered through qualitative investigation provides contextual understanding for the more generalisable and broad relationships identified during quantitative data collection (as in the work of Matawa, 2009, described in Section 2.3.3.1). Understanding context is essential from a phenomenological perspective, as it allows the details of the individual’s subjective experience to be represented in relation to their lived experiences, and highlights the diversity of experience present within, and across, accounts and the factors which may contribute to this diversity (Willig, 2013).

Finally, drawing on Bryman's concept of ‘Utility’, a mixed-methods approach will maximise the usefulness of findings for the greatest number of people. One of the aims of the current thesis is to identify how access to music and musical experiences might be improved for

individuals who have a VI. As such, the current research has the potential for practical application beyond the project. The mixed-methods employed in the current project provides both detailed exploration of these challenges, a wider overview of experiences from a larger cross-section of VI adults and adolescents, and opportunities to consider the impact of different factors on musical engagement for this group. Combined, this data offers a comprehensive picture of the topic under exploration and greater utility of findings.

UK charity Attitude is Everything (2018) has sought to improve inclusivity of live music events for individuals who are deaf and disabled, with research being central to this goal. Their most recent 2018 report commented on recent improvements to methods employed to explore the accessibility of live events, with a greater emphasis on balancing the collection of quantitative data (binary yes/no questions) and qualitative data (including open-ended survey questions and qualitative email interviews) from mystery shoppers. As demonstrated by the success of Attitude is Everything (2011, 2014, 2016, 2018), research which provides a comprehensive exploration of the topic at hand offers the greatest possibility for implementing change which is beneficial to the greatest number of individuals.

3.2.4 Theoretical underpinnings

The current thesis draws on the theoretical framework offered by a social psychological approach to explore aspects of musical life for individuals who have a VI. This approach emphasises the social contexts in which people create, perform, perceive, understand, and react to music (North & Hargreaves 2008). In the current research, considerations of social contexts are of relevance to understanding several aspects of everyday musical engagement, such as music's role in expressing identity, as part of individuals' social and leisure lives, and as a factor influencing musical engagement across the lifespan. Thus, music is viewed as an interactive experience between the individual and their environment. Social context may be a particularly important consideration in the current study due to longstanding societal beliefs relating to VI and musical life, and the contribution of social and environmental factors to the potential barriers faced by VI individuals in relation to musical engagement.

3.2.4.1 Interpretative Phenomenology

This thesis takes a phenomenological approach to everyday musical experiences, viewing music as a subjective phenomenon (*cf.* Greasley, 2008). This approach seeks to describe and produce knowledge about subjective experience and highlight the qualitative diversity of experiences (Willig, 2013). In the current thesis, the qualitative stages of data collection, and inclusion of open-ended questions in the survey, served to address these subjective and individual experiences, recognising both similarities and differences in experiences of participants.

Specifically, this thesis aligns itself with an Interpretative Phenomenological approach and its two underlying principles: phenomenology, and the dynamic research process (Smith & Osborn, 2008). The approach is phenomenological in that it involves detailed examination of the participant's life-world, attempts to explore personal experience, and is concerned with an individual's personal perception or account of an object or event (Smith & Osborn, 2008). The second principle, the dynamic research process, emphasises research as an interactive and interpretive process; the researcher's own conceptions are required in order to make sense of the life-world that they are attempting to access (Smith & Osborn, 2008). This is in direct contrast to the values held by quantitative paradigms, which emphasises the importance of removing bias through researcher neutrality and objectivity (Guba & Lincoln, 1989). In the current thesis, the researcher is viewed as integral to the generation of knowledge; I have made decisions regarding research design, directed the focus of interviews, undertaken the analysis of data, and decided which themes will be the focus of discussion. Regardless of my beliefs that the views and experiences of participants were best represented by these decisions, the mediating role of the researcher cannot be removed from any aspect of the research process. This openness toward the active role played by the researcher represents an inherently reflexive attitude within the research and analysis process (Shaw, 2010). The topic of reflexivity and its relevance to this project is returned to in Section 3.3.

Those studies which have employed a phenomenological approach have provided valuable insight into the experiences of individuals who have a VI in various aspects of life, including the social and educational experiences of young people (Goodwin, Lieberman, Johnston & Leo, 2011; Haegele & Zhu, 2017) and the experiences of older adults with sight loss (Burton, Shaw & Gibson, 2015; Weaver Moore & Miller, 2003; Smith, 2012). These studies attempted to step into the life-world of participants to explore their lived experiences (Berndtsson, Claesson, Friberg & Öhlén, 2007). The current thesis also aims to focus on the lived experiences of participants through its use of Interpretive Phenomenology; to date, no such approach has been employed to explore the facets of everyday musical engagement for the wider VI community.

3.2.5 Ethical considerations

Research was carried out in line with the British Psychological Society's ethical guidelines (BPS, 2018). Ethical approval was granted in January 2016 by the University of Leeds Research Ethics Committee (See Appendix B for application of ethical approval). Whilst all my participants would be aged 16 years and above (able to consent to the research themselves, according to BPS guidelines) most, if not all, would be registered as either SI or SSI and thus, could be considered vulnerable participants (Equality Act, 2010). It should be noted that use of the term 'vulnerable' reflects legal terminology rather than my own perceptions and beliefs regarding VI or disability. Given the minimal risk that the research posed to the physical or

psychological health and safety of participants, implementation of standard ethical measures were appropriate to ensure that participants were protected (BPS, 2018).

Informed consent was obtained from participants before their participation, and information was available prior to their agreement to take part so that they were able to decide, over time, whether they would like to be involved. Participants were provided with information regarding the research process, the level of confidentiality which would be upheld throughout the project, and the voluntary nature of participation. However, as Allmark et al. (2009) notes, for qualitative methods such as interviews, discussion with participants may explore unexpected areas, which makes it difficult to give full information about the nature of the interview at the outset. Thus, whilst the topic under exploration was, itself, unlikely to cause upset to participants, it was not possible to know fully the topics that might be discussed.

In order to make the consent process as simple as possible during the qualitative data collection phases, participants were given the option of completing a consent form either by hand or verbally. In both cases, I read the consent sheet to the participants. Participants were then able to sign the consent form or give their consent verbally (this process was audio recorded). To ensure the continued consent of participants during qualitative data collection, individuals were provided with opportunities to ask questions both before and after participation. At all stages of data collection, either a verbal or written debrief was provided.

Another source of concern was that that discussion relating to VI during qualitative data collection could be sensitive or upsetting for participants. Whilst the current research aimed to explore a topic which I considered to be non-sensitive, it was possible that asking participants to give details of a VI, or to discuss the impact that having a VI may have had on an aspect of their life, could be upsetting. Lee (1993) suggests that issues might be sensitive if they are considered private or stressful; changes to vision or the onset of an impairment could be considered as such. To minimise the risk of distress, full disclosure of the research aims and process of participation was provided and participants were also informed that even during participation, they had the right to not answer questions, and were able to withdraw at any time. I remained wary of any potential signs of distress during both the focus groups and interviews. Whilst some participants expressed frustration in relation to their experiences with VI, no signs of distress were evident, and all participants spoke openly about these experiences.

3.3 Reflexivity

Reflexivity has been increasingly recognised as a central facet in the process of generating knowledge through qualitative research (Berger, 2015). Within the qualitative research process, reflexivity requires the researcher to focus on self-knowledge and sensitivity, to understand the role of the self in the creation of knowledge, and to monitor the impact of their biases, beliefs,

and personal experiences on their research (Berger, 2015). Qualitative researcher Tracy (2010) refers to this process as 'self-reflexivity', described as 'honesty and authenticity with one's self, one's research, and one's audience' (p. 842). This contrasts the positivist view of the researcher and participant/-s as occupying separate and distinct roles within the research process; a reflexive approach sees the researcher actively acknowledge that their position may affect the research process and outcome; the process cannot be a subjective one (Berger, 2015).

I was conscious when I embarked on this project that I was conducting research with a group of individuals whose sensory experiences would be different to my own. As someone with no experience of having a VI, it was necessary for me to remain open-minded regarding the range of experiences that participants might have, and to avoid drawing assumptions about the experiences of one individual based on those of another. I aimed, from the outset, to develop an understanding of the research topic based on the accounts and experiences of the participants themselves.

I also brought to this project a great personal interest and enthusiasm for music; however, I was careful to ensure representation of participants whose interest in music were different to my own. In this respect, the thesis fulfils Guba and Lincoln's (1989) call for 'Authenticity' in qualitative research, through representation of a range of different realities (described by the authors as 'fairness', p. 245). From the outset, every effort was made to recruit participants who would represent a range of musical backgrounds, experiences and interest. I was also wary, during qualitative data collection, of imposing my own enthusiasm for music on to participants. This was particularly important for those who showed a lower level of engagement with music or appeared less confident in sharing their experiences with me. The aim was to ensure that all participants, irrespective of their level of musical engagement, knew that their views were of interest to me, and of value to the project.

Tracy (2010) argues that sincerity is an integral part of the reflexive process. Throughout the project I was honest and transparent regarding the nature of the project, and my own personal and research background. During qualitative data collection, participants were given the opportunity to ask questions about myself or the project both before, and after their participation. However, I avoided revealing too many of my own musical interests or enthusiasms until after the focus group/interview. It was hoped that adopting a neutral stance during data collection would ensure that participants felt able to share their experiences and interests, whilst allowing them to ask about my interests meant that I was able provide them with a genuine and honest insight into my own musical life. Throughout the project I aimed to fulfil Tracy's (2010) description of a sincere researcher, 'Sincere researchers are approachable rather than self-important and friendly rather than snobbish... Sincere researchers are empathetic, kind, self-aware, and self-deprecating' (pp. 842).

3.3.1 The use of terminology in the current thesis

As acknowledged in Section 3.5, I am a sighted researcher working alongside participants with a VI. As such, I have experienced a growing preoccupation with concerns relating to terminology when speaking with, and writing about, participants. At the beginning of the research process, I believed that this apprehension would subside as I came to understand the nuances of terminology within the field. This has not been the case, and there are several reasons for this continued deliberation. Firstly, as a typically sighted researcher, I am in a poor position to decide what terminology might be most appropriate for each individual, I have no personal experience of VI, sight loss, or changes to my vision. Secondly, the variability in terminology apparent in VI research provides little guidance on this issue (see discussion in Section 2.1.2). Finally, I have become increasingly aware that terminology applies differently to each individual. In some cases, discussion with participants showed a lack of preference or a nonchalance towards how they, or others, referred to their VI. One interview participant stated, 'I lose track of what they say, I say blind, blind as a bat, can't see owt, whatever'. Such comments were reassuring, although were at odds with my understanding of the focus of individuals and organisations to establish 'politically correct' terminology with which to refer to VI (*cf.* Omvig 2008 for a discussion of this from the viewpoint of someone who has a VI). In contrast, others had a clear preference for how they referred to their VI, although these preferences varied; some referred to themselves as 'blind', 'totally blind', or 'visually impaired', whilst others described their experience, 'I can't see anything' or referred to a specific condition. Furthermore, another interview participant commented that they avoided labels as much as possible due to the association they saw them having with fully accepting and making visible their VI to others: 'I don't want the kind of label I suppose that goes with it and everything else, it's a tricky one'. In this case, past experiences and current attitude towards sight loss impacted on the way that this individual labelled, or chose not to label, their VI.

The above considerations, current processes of categorisation, and existing literature which has explored musical life for those who have a VI (Baker & Green, 2017) has informed the terminology used in this thesis. In line with research carried out by Baker and Green (2017), I use 'visually impaired' (VI) as an umbrella term to refer to people who have experienced an impairment along the continuum of 'sight impaired'. This includes those who have a less severe impairment, and therefore retain a degree of functional vision, partial sight, or low vision ('sight impaired') and those who are 'severely sight-impaired', who may refer to themselves as blind, have no or very little functional vision, and may or may not retain some level of light perception. Secondly, I have chosen to employ the terms 'severely sight impaired' and 'sight impaired' rather than 'blind' and 'partially sighted', unless reflecting terminology employed by researchers whose work I am citing or the words of participants. This reflects the current use of these terms in the certification process for VI (Royal College of

Ophthalmologists, 2017). ‘Visually impaired’ is used interchangeably with the phrase ‘sight impaired’ and is employed as a broad descriptive term with which to refer to participants in the project (although at times, a distinction is made between ‘sight impaired’ and ‘severely sight impaired’). Finally, the term ‘early onset’ refers to an impairment which developed between birth and the age of 12 years, and ‘Late onset’ refers to those impairments which developed after the age of 12 years. Appendix C provides the reader with an overview of terms used within this thesis.

3.4 Overview of methodology

The current research adopted a mixed-methods approach to explore the everyday musical experiences of individuals with a VI. As discussed in Section 3.3.3, there were several reasons for adopting this approach in the current project, including the ability to create a more comprehensive account of the topic at hand, to provide appropriate levels of contextual understanding, and to achieve utility of findings for the greatest number of people. Qualitative techniques provide detailed and explanatory accounts, whilst quantitative techniques explore the experiences of a greater number of individuals and identify patterns across data.

In line with definitions provided by Leech and Onwuegbuzie (2009), mixed methods may be considered either fully mixed, whereby quantitative and qualitative techniques are mixed within one or more stages of the research, or partially mixed, in which the quantitative and qualitative phases are not mixed within or across stages. Within the current research, a partially mixed method is adopted; each study was carried out sequentially, in its entirety, before being mixed during the data interpretation stage (Leech & Onwuegbuzie, 2009). Typically, psychological researchers have adopted this approach to mixed-methods research, employing the method that drives a project theoretically first, and using subsequent methods to resolve problems which arise, or extend findings from earlier studies (Morse, 2010; Waszak & Sines, 2003).

In the following sections, I provide details of sampling techniques used in the current project, before offering an overview of the methods used during data collection for each study. This includes a description of the qualitative and quantitative techniques employed, and the rationale for employing these techniques. Section 3.4.3 then describes the approaches to data analysis employed in each study. Further details of the method and procedure employed in each study can be found in Chapters 4, 5 and 10.

3.4.1 Sampling and prerequisites for participation

Participants were recruited for all three studies using convenience sampling and were accessed through membership of charitable organisations and online social media groups for these charities. As Emerson (2015) writes, there has been a tendency towards convenience sampling in research with VI participants due to the relatively low-incidence of VI in the general

population. For quantitative research, convenience sampling is problematic because statistics function on the basis that samples are random; an unrepresentative sample may skew results and reduce generalisability of findings (Emerson, 2015; Robinson, 2014). Indeed, research carried out with VI participants suggests that sampling methods directly impact on the results of studies. A meta-analysis carried out by Pinguart and Pfeiffer (2011) showed that declines of psychological well-being as a result of sight loss were higher in studies with convenience samples than those who employed random sampling. This may reflect the effect of self-selecting participation and the tendency for those experiencing difficulties to be more accessible to researchers (e.g. they may have more contact with health-care providers and charities and may be more interested in sharing their experiences with researchers). This has implications for the current project, which aims to explore challenges faced by participants in relation to musical engagement. The findings of Pinguart and Pfeiffer (2011) suggest that the difficulties and challenges experienced by VI participants may be greater than those experienced by the wider VI community. However, given the focus of the current project on exploring, in detail, the experiences of the individual, rather than producing a fully generalisable picture of musical life for all VI persons (see discussion of theoretical underpinnings in Section 3.2.4), convenience sampling was considered appropriate. It is recognised that the task of generalising findings to the experiences of the target population would require a focus on stratifying its sample to adequately represent the higher proportion of elderly adults who have a VI (Slade & Edwards, 2018).

Participants were not provided with any financial incentive; they took part in the research voluntarily because they wanted to/were willing to. Participants for Study 1 were approached by contacts at the Royal National College for the Blind and Sheffield Royal Society for the Blind on my behalf. Sessions were organised by contacts to fit-in with the timetable of activities run by these institutions. Participants for Studies 2 and 3 were also recruited by contacts at organisations, this time through email mailing lists. Organisations included regional branches of The Guide Dogs for the Blind Association and the RNIB. The survey used in Study 3 was disseminated via the social media pages of some of these organisations and my own personal accounts.

In light of the inconsistencies in terminology, and the lack of specificity relating to the nature of VI in existing research (see discussions in Sections 2.1.2 and 2.1.3), it appeared essential, at the early stages of development for this project, to set the prerequisite of a certification of a ‘severe visual impairment’ in order for individuals to participate. My rationale for this was that such a prerequisite would ensure that the level of individuals’ impairments was comparable, regardless of the exact nature, cause, or time of onset. However, it became apparent that this prerequisite was inappropriate for two reasons. Firstly, it was brought to my attention that not

every person who has a VI (severe or otherwise) registers their impairment. This has obvious implications for the exclusion of potential participants who have a VI but have chosen not to apply for certification. Secondly, to only explore the lives of those with a severe VI, on the assumption that they may be most affected by sight loss contradicted my growing understanding of the varied experiences of those living with a VI. It could be argued that age of onset is a consideration of equal importance to whether a person has a moderate or severe VI. As such, a prerequisite based on a single label of severity was removed. Following the first phase of fieldwork, recruitment materials specified that I was ‘seeking individuals who are registered as moderately or severely sight impaired, or those who consider themselves to be moderately or severely sight impaired but are not registered as such’, rather than recruiting only those who were registered as severely sight impaired. This offered a means of ensuring some comparison across experiences, without imposing unnecessary restrictions on participation. Furthermore, participants were asked to describe the nature of their VI in both Study 2 and 3, which overcame any concerns regarding a lack of specific data about participants’ impairments. Details of the samples for each of the studies can be seen in Section 3.5.

3.4.2 Specific methods

3.4.2.1 Study 1

The primary aim of Study 1 was to provide an initial exploration of musical life for individuals with a VI. Focus groups were employed during this phase due to their ability to reveal the range of participants’ thoughts and experiences, and thus provide a broad overview of the topic from the groups’ perspective (Morgan, 1997). This was useful in identifying salient aspects of the topic which required further exploration in future stages of data collection. Focus groups have been valuable in research relating to the experiences of individuals who have a VI due to their accessibility compared to other research methods (those which require access to print materials) and the opportunities they provide participants for a supportive environment in which to share experiences and advice (Girdler et al., 2008; Green, Siddall & Murdoch, 2002; Teitelman & Copolillo, 2005). Focus groups have also been employed effectively in emergent areas of VI research. One such example is Richards, Pritchard and Morgan (2010) who employed focus groups to explore the tourism experiences of individuals with a VI. The authors note the value of focus groups in under-researched areas thanks to the opportunities they offer to gather rich insight into new fields of exploration. The current study employed focus groups to this end.

A focus group schedule was used to guide sessions, progressing through a series of questions relating to everyday musical engagement, functions of music, accessing music, technology use, potential barriers to musical experiences, sources of help and information, and the importance of music (see Appendix D for focus group schedule). Focus groups offered an accessible means of gathering initial data on the topic of everyday musical experiences from multiple participants

and provided participants with an opportunity to share their experiences with both myself and other members of group in an interested and supportive environment.

3.4.2.2 Study 2

Expanding on findings from Study 1, Study 2 aimed to explore, in detail, the unique musical experiences of individuals who have a VI. To this end, the study employed semi-structured interviews. Bryman (2016) observes that amongst the main preoccupations of the qualitative researcher is the importance of seeing through the eyes of the participant, and the ability to provide description and context. This stage of the research process aimed to achieve both objectives by exploring the experiences of each participant from their own perspective, offering opportunities for participants to voice opinions and discuss their perceptions, and exploring, in detail, the topic of everyday musical life.

Findings from the focus groups informed the construction of an interview schedule (see Appendix E) to guide interviews through key topics (see Section 4.4 in Chapter 4 for details). This interview schedule was used as a flexible guide, allowing for freedom in the sequencing, wording, and prioritising of questions (Robson & McCartan, 2016). During the interviews, participants were viewed as the expert on the subject at-hand, and the aim was to allow them ‘maximum opportunity to tell his or her own story’ (Smith & Osborn, 2008, p.59).

3.4.2.3 Study 3

Study 3 aimed to gather data on a wide range of facets of everyday musical life from a greater number of participants than is possible through qualitative data collection (due to limitations of time and cost). Survey techniques were also useful in exploring and comparing the experiences of participants who varied in age, gender, nature of VI, level of musical engagement and geographic location. This study provided further exploration of those topics which were identified as salient in Studies 1 and 2, including the functions of music, the use of technology for musical engagement, and attendance at live music events (further details regarding the construction of these questions can be found in Section 10.2.2). The survey gathered both quantitative (nominal and ordinal data) data and qualitative responses. From a phenomenological perspective, the use of open-ended responses, which allowed participants to provide details about their experiences, was an important part of the survey design; participants were able to provide specific examples, return and expand on issues raised in the survey, and voice their experiences in their own words.

In acknowledgment of the limitations of a survey to adequately represent the complexities of a phenomena such as everyday musical life, data gathered during this study was considered supplementary to the data gathered during Studies 1 and 2, offering a snapshot of participants’ musical experiences rather than a detailed account of all aspects of their musical lives.

The survey was designed to be as accessible as possible. It was important to consider the respondent experience and ease of completion. The survey design was informed by recommendations from an individual who had a VI (a Study 2 participant who was a Braille transcriber). The use of similar question formats throughout ensured that participants' time was not wasted deciphering how to answer questions. The survey was also available in three different formats: online, as a printed questionnaire (large-print format), and over the phone. Physical copies (large-scale format) were available on request. Having consulted with a contact at the RNIB, who was able to reflect on survey research carried out by the organisation, it was decided that offering a Braille survey was surplus to requirement. However, had a participant requested this format, arrangements had been made to produce a Braille transcription (the abovementioned Study 2 participant offered their support in this task). It was hoped that offering multiple formats would allow as many individuals as possible to take part, including those who were less comfortable accessing the survey online or might need sighted support.

3.4.3 Data analysis

3.4.3.1 Study 1

Focus group data were analysed using thematic analysis (TA). Focus groups are useful in establishing themes or discourses present in group interaction, but it may be difficult to distinguish between group and idiographic accounts, or to account for the impact that the group environment may have on the detail with which individuals describe their experiences (Smith, 2004). As such, TA offered a flexible tool with which to summarise key themes of the data and to highlight similarities and differences across the data set (Braun & Clarke, 2006).

3.4.3.2 Study 2

The semi-structured interviews were analysed using Interpretative Phenomenological Analysis. As discussed in Section 3.2.4.1, IPA aims to provide in-depth exploration of participants' lived experiences (Pietkiewicz & Smith, 2014). Thus, IPA was a useful approach for attending to the lived musical experiences being explored in this study. In accordance with guidance from Smith and Osborn (2008), analysis progressed through a series of readings, annotations, labelling and grouping of themes. A series of superordinate and emergent themes were identified, which were used to orient analysis of the remaining interview transcripts. A detailed account of this process of analysis is outlined in Chapter 5, Section 5.2.5.

3.4.3.3 Study 3

Quantitative data gathered during Study 3 was analysed using descriptive and inferential statistics. This offered a means of building an overall picture of musical engagement for the sample and provided opportunities to compare responses of participants, dependent on factors such as age, age of onset, or presence of additional disability. In order to explore these

differences, data were analysed using correlations, t-tests, and ANOVA. Open-ended responses were analysed using TA, in line with practical guidance provided by Braun and Clarke (2006).

3.5 Participants

3.5.1 Study 1 participants

A total of 17 participants were involved in data collection for Study 1. Seven males and 10 females participated. All participants were registered as SSI except one, who was registered as partially sighted. Table 3.1 provides demographic information of each focus group participant and the mean age of the focus groups.

Table 3.1: Details of focus group participants for Study 1.

Mean age	Participant	Age	Nature of visual impairment
Group 1, n= 3			
87.7 years, <i>SD</i> = 10.69	Harry	76 years	Stroke
	Jessica	97 years	Trauma following cataract surgery
	Gail	90 years	Age related macular-degeneration (AMD) and diabetic retinopathy
Group 2, n= 4			
80.3 years, <i>SD</i> = 23.60	Lilian	45 years	Damage caused by epilepsy medication
	Irene	90 years	AMD
	Edith	92 years	AMD
	Phillis	94 years	AMD
Group 3, n= 5			
16.6 years, <i>SD</i> = 0.55	Will	16 years	Brain tumour during infancy
	Hannah	17 years	Congenitally blind, some remaining functional vision
	Rory	17 years	Congenitally blind since birth, complete lack of vision
	Alex	16 years	Congenitally blind, some remaining functional vision
	Faye	17 years	Congenitally blind
Group 4, n= 3			
19.3 years, <i>SD</i> = 2.08	George	17 years	Achromatopsia
	Dan	21 years	Retinitis pigmentosa and macular ischaemia
	Sarah	20 years	Congenitally blind (neurological)
Interview 1			
	David	30 years	Congenitally blind
Interview 2			
	Trish	29 years	Car accident during childhood (neurological and physiological trauma)

3.5.2 Study 2 participants

In Study 2, a total of 21 participants were interviewed, but data from one interview was removed from analysis due to a lack of relevant content and discussion of a sensitive nature which would have compromised this participant's confidentiality. As such, data from 20 participants was included in the analysis. Participants were aged 20 to 84 years of age ($M=51.15$ years, $SD=15.82$). All were based in the UK, except for one participant, who was interviewed by Skype from Australia. The sample included a married couple and a father and son, but these interviews were carried out separately to avoid any unconscious bias. Six

interviews were carried out with participants in Leeds and the surrounding areas, two participants came from the Midlands, three were London-based and two came from Kent (father and son), two participants came from Chester (husband and wife) and two from Surrey. One participant each came from Cambridgeshire, North Wales, and Australia.

All participants had a SSI. Five participants had a degenerative condition which had developed during their childhood and 13 participants had been sight impaired since birth, with a similar level of sight throughout their life. One participant had lost their sight at the age of 17 months due to a childhood cancer and one participant had experienced late-onset sight loss, at the age of 22. It should be noted that this individual was now 60, so had been living with her impairment for many decades. An overview of the sample can be seen in Chapter 6, Table 6.1, and a short biography of each participant can be found in Appendix J.

3.5.3 Study 3 participants

94 participants completed the survey in Study 3, aged between 16 and 83 years ($M= 44.56$, $SD=16.39$). There were 44 male and 48 female respondents; one participant described themselves as ‘gender fluid’ and another as ‘male to female trans’. The sample was recruited opportunistically through social media, email, and requests to individuals who had taken part in earlier studies.

3.6 Chapter summary

This chapter has outlined the methodology used in this thesis. It has set out the main research aims and questions to be addressed, discussed methodological and ethical considerations, and described the general methods used during each phase of data collection and analysis.

In summary, this research employs a mixed-methods approach, combining qualitative and quantitative research techniques with the aims of providing ‘Completeness’, ‘Context’ and ‘Utility’ within its findings (Bryman, 2016). The underlying principles of Interpretative Phenomenology have been used to guide this research, with the aim of providing descriptions of experiences as they occur in daily life and offering insight on the topic from the perspective of the individual (Bryman, 2016; Willig, 2013; Smith & Osborn, 2008).

In the following chapters, I report the results of the three empirical studies carried out over the course of this research project, providing additional details regarding the methodological and analytical processes employed. This begins with a discussion of findings from the focus group study in Chapter 4.

4 Study 1: Focus Groups

In this chapter, I outline the first study carried out in this project to explore the musical lives of individuals who have a VI, a focus group study. The chapter first outlines the aims, methods and procedures of the study, before discussing findings and the implications of these for subsequent studies.

4.1 Aims

The current study provided an initial exploration of the musical lives of adults and adolescents with VI. This exploration aimed to investigate the role of music in participants' lives, the types of musical activities participants were involved in, and in what way having a VI might impact on participants' musical engagement. The focus groups were designed to explore a number of aspects of musical engagement, including listening behaviours, functions fulfilled by music, the use of technology in musical engagement, and participants' experiences of live music events.

4.2 Method

As discussed in Chapter 3, this was the first study of three to explore the musical experiences of participants with a VI across the adult age range. Focus groups were considered a useful method for several reasons. Firstly, focus groups provide a useful starting point for future research, revealing the range of participants' thoughts or experiences and providing opportunities for participants to talk about topics which are most important to them (Bryman, 2016; Kitzinger, 1995; Morgan, 1997). Given the limited research in this area, this process offered essential contextual grounding for the development of subsequent stages of fieldwork. From a practical viewpoint, focus groups allow multiple voices to be heard in one sitting, allowing the gathering of rich data in new fields of enquiry (Richards et al., 2010).

4.3 Materials

A focus group schedule was used to allow comparison between sessions and to ensure that key topics were discussed. An engagement question asked participants to summarise their everyday engagement with music. This gave each participant the opportunity to speak and to relax into the research environment. Responses were useful in gauging participants' levels of musical engagement and highlighting topics to return to. Questions were designed to explore the role of music in participants' lives and gain an understanding of the possible impact of their VI on their experiences with music. Existing literature highlighted key topics for exploration, including functions of music (Greasley & Lamont, 2011; North et al., 2004; Schäfer et al., 2013), the use of technology in musical engagement (Avdeeff, 2012; Ayers, 2006; Krause, North & Hewitt, 2015) and live music experiences (Ballantyne et al., 2014; Brown & Knox, 2017; Pegg & Patterson, 2010). Other important topics included potential difficulties accessing

cultural events (Bunting et al., 2008; Attitude is Everything, 2014, 2016, 2018) and using technology (Patch et al., 2018; McGookin et al., 2008; El-Glaly et al., 2013).

Focus groups were based around nine questions (see Appendix D for focus group schedule). Participants were asked about the functions fulfilled by music, any occasions where they felt unable to access a musical experience, and any barriers or sources of help relating to musical engagement. A closing question asked participants if there was anything further that they would like to discuss. Several cues were listed to aid in the running of sessions although these were rarely used. Follow-up questions were used to verify or further explore participants' comments.

4.4 Procedure

The current study aimed to recruit participants who varied in age, nature of VI, geographic location, and level of musical engagement. In order to meet this aim, participants were recruited through multiple channels, including The Sheffield Royal Society for the Blind (SRSB), The Royal National College for the Blind (RNC), and the Leeds University Union Disability Action Group. Focus groups were carried out with clients and students on the premises of SRSB and the RNC. Sessions were arranged by contacts at these organisations, based on participant availability and timetabling of other activities. Contacts were sent information about the study so that they knew the aims of the research and the recruitment process. Groups consisted of 3-5 participants and sessions lasted approximately 30-45 minutes. Prior to conducting the focus groups, an information sheet outlining the procedure was read aloud to the group (see Appendix F for verbal information sheet). Participants were able to ask questions at this point, and verbal consent was given. The focus group schedule was used flexibly, as recommended by Bryman (2016), so whilst sessions began in a similar manner, each unfolded in a unique style and structure. The amount that I intervened during the sessions also varied, dependent on participants' level of engagement. It should be noted that a small number of one-to-one interviews were carried out during this stage of fieldwork. The focus group schedule was used to guide these interviews. In total, 4 focus groups and 2 interviews were carried out.

4.5 Analysis

Sessions were audio recorded and transcribed verbatim. Transcriptions were read-through several times to ensure a high level of familiarity with the data. TA was used to analyse the data, in accordance with guidelines from Braun and Clarke (2006). TA is practically and theoretically flexible, making it compatible with a broad range of methodological techniques and a suitable means of exploring data during this early phase of data collection (Braun & Clarke, 2006). Potential themes were identified initially using physical copies of transcriptions with pen and paper; NVIVO 10 was then used to organise themes and sub-themes. Themes

were inductive (data-driven), meaning that data was coded without trying to fit it into a pre-existing coding frame (Braun & Clarke, 2006). A total of 79 codes and 19 main themes were identified (See Appendix G). A thematic map can be seen in Figure 4.1.

4.5.1 Structure of results

As outlined in Section 3.2, two of the aims of the current thesis were to explore the musical lives of adults and adolescents with a VI, and to consider the impact that a VI may have on access to music and musical experiences. These aims were used to guide the focus and structure of the following analysis. Sections 4.7.1 to 4.7.4 offer an overview of the musical engagement of participants, including the types of musical activities engaged in, the functions fulfilled by music, and their use of technology for music listening. Sections 4.7.5 to 4.7.8 then consider the potential impact of a VI on both recorded and live music experiences, music-making, and access to help and information. As seen in Appendix G, a great number of themes relating to each of these topics were identified. Given the scope of the current thesis, discussion of all of these themes is not possible and so, the analysis that follows focuses on those themes which were most prevalent in the data or offer divergence from findings relating to everyday musical engagement in existing literature. Note, the qualitative analysis throughout this thesis identifies comments from participants using their pseudonym and their age in years (e.g. Mike, 41).

4.6 Results and discussion

Most participants engaged in discussion about their musical lives readily. Conversation included discussions of favourite artists, making music, live events, and musical experiences during childhood. This demonstrated the wide-ranging role of music in participants' lives.

4.6.1 Musical engagement

Participants varied in their levels of musical engagement, the musical activities in which they participated, and the factors impacting on musical engagement. Musical activities included active (concentrated) and passive (background) listening, practising and performing, and one participant, Edith, talked about official music qualifications. Several participants acknowledged that their musical engagement had changed over time. A common observation amongst adult participants was the importance of music during their teenage years. David commented, 'As a teenager it played more of a crucial role'. When asked about important musical moments in his life, he referred to his first experience of playing the guitar as a teen. Existing literature demonstrates that music may play a particularly important role in the lives of teenagers and young people (Miranda, 2013; North et al., 2000; Papinczak et al., 2015). These years are often associated with self-exploration and identity formation, of which music may play an important role (DeNora, 2000; Greasley, 2008; Lonsdale & North, 2011).

Almost all of the participants had played an instrument or sung during their life, with some

receiving formal music tuition, and others describing self-directed learning. Individuals recalled experiences of both solo and ensemble music-making in a range of private and public settings. Playing an instrument or singing was a central facet of musical engagement for some. Phillis commented that she still played her organ at home every day, 'I fiddle about with it sometime during every day'. Despite the onset of her VI, music-making remained important. In contrast, engagement with music-making had decreased for younger participants Emily and Alex with their admission to the RNC and new academic commitments. Emily observed 'I used to play guitar when I was younger... I just haven't really had the time'. The impact of these practical limitations on engagement with music-making reflect existing research, which has found factors such as the educational environment and time constraints to impact on motivations for instrumental playing (Evans, McPherson & Davidson, 2013; Hallam, 2002, 2016).

On the topic of musical preferences, many participants expressed their liking for a broad range of musical styles. Several noted their enjoyment of 'most', or 'any' type of music, and others expressed their liking for music 'in general'. As Greasley (2008) found, individuals tend to report listening to a wide range of musical styles. The importance of musical variety was also highlighted. Irene acknowledged that whilst sometimes unable to determine exactly what she wanted to listen to, musical variety was essential in preventing repetition and boredom.

You've got to have variety, you've just got to... I mean it's no good sort of, having the same things you know, week in and week out because you can get absolutely bored out of your head, well I would... You know, it's very difficult, you can't say what you do want really (Irene, 90)

Both George and Dan took pride in their wide-ranging musical preferences. The pair had developed a close friendship and what unfolded during discussion appeared to be a friendly game of one-upmanship relating to their preferences.

My average playlist has got, literally it goes from like SlipKnot and stuff like that to Mozart and Beethoven and stuff and it's like why, and people will ask me why and I'll be like because it's just, it's nice (George, 17)

Well my one as well, it goes from swing to pirate metal to SlipKnot to Frank Sinatra and Foo Fighters and then you've got like heavy German trance metal bands like We Butter the Bread with Butter and stuff like that (Dan, 21)

Elderly participants tended to focus more on musical dislikes. These participants were clear in their dislike of certain musical features, typically associated with popular styles.

You don't know what they're saying, you can't hear what they're saying... They repeat, the line goes on and on. My husband'll say 'what do they call this?' (Gail, 90)

I think these'll agree that there are no songs that come out now that are like we... used to have (Harry, 76)

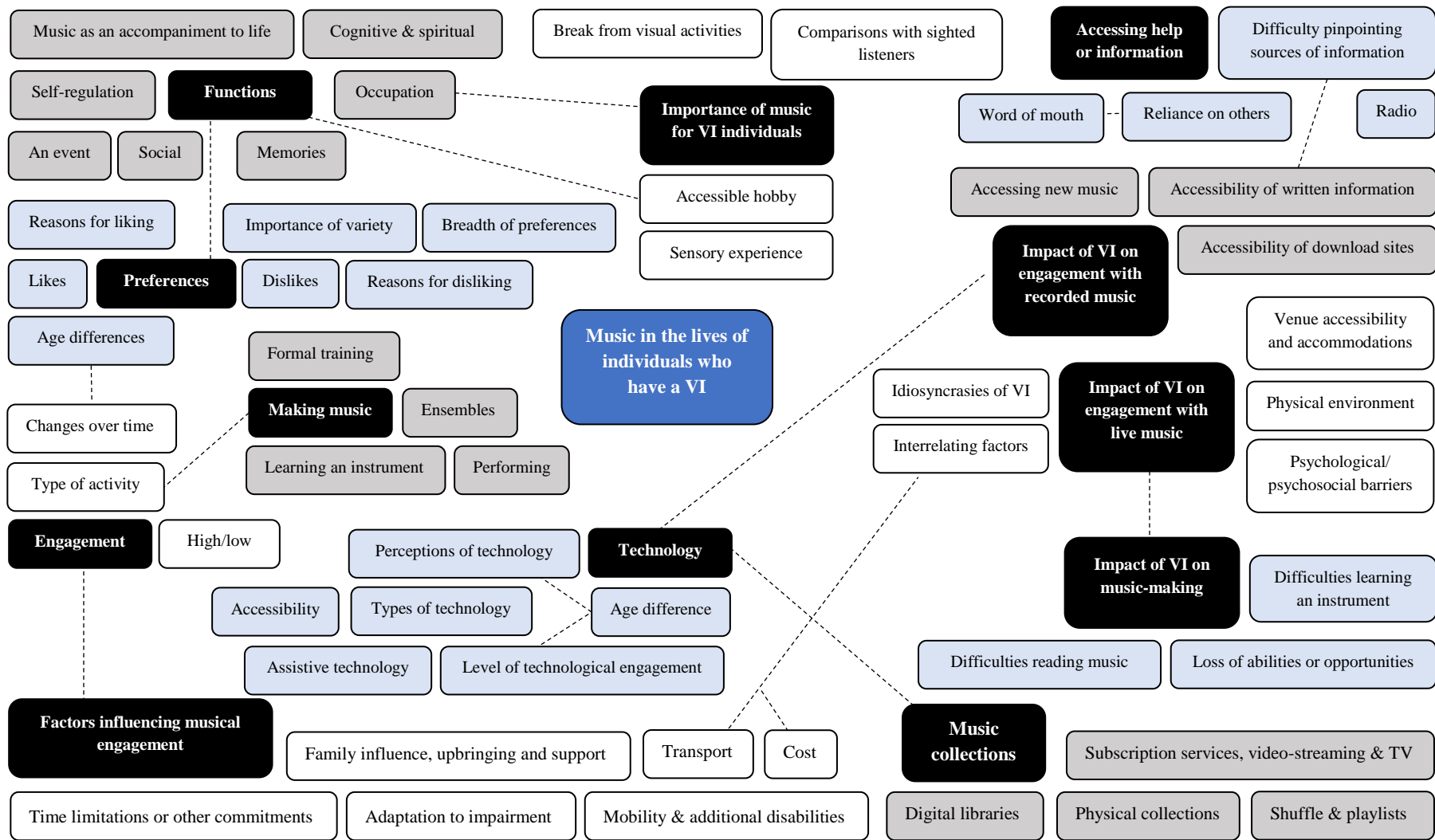


Figure 4.1: Thematic map of music in the lives of individuals who have a VI.

However, discussion of dislikes was not limited to elderly participants. Alex reported a dislike for rap music due to the inability to hear the lyrics, whilst Trish’s spiritual life meant that she actively avoided some types of lyrics, ‘Music that’s spoken it’s changed for me. Especially if the words are... a bit aggressive... I actually can’t deal with it’. Similar findings were reported by Greasley et al. (2013), who found that devout Christians in their sample actively avoided music with lyrics that may be considered offensive or blasphemous.

4.6.2 Functions of music

TA identified six main functions of music: music as an accompaniment to life, self-regulation, social functions, occupation, reminiscing, music as an accessible hobby, and cognitive functions (see Table 4.1 for list of themes and subthemes).

Table 4.1: Seven functions of music identified in focus group study.

<p>1 Music as an accompaniment to life</p> <ul style="list-style-type: none"> Travel Housework and chores Academic work Physical exercise During other leisure activities Making the mundane an event 	<p>4 Occupation</p> <ul style="list-style-type: none"> Job opportunities Musical engagement through vocation
<p>2 Self-regulation</p> <ul style="list-style-type: none"> Mood and emotional regulation Relaxing Energising Therapeutic properties 	<p>5 Reminiscing</p> <ul style="list-style-type: none"> Autobiographical memories Making memories Dance
<p>3 Social functions</p> <ul style="list-style-type: none"> Engagement through friends and family Bringing people together Friendship 	<p>6 Accessible hobby</p> <ul style="list-style-type: none"> Break from using residual vision
	<p>7 Cognitive</p> <ul style="list-style-type: none"> Thinking and learning about, or from, music

The role of music as an accompaniment to various activities in daily life was common amongst the sample. All of the participants noted at least one occasion during which music was an accompaniment to a non-musical task or activity, including travel, housework and chores, physical exercise, and other leisure activities. Existing literature highlights the plethora of contexts in which music is used (Juslin, Liljeström, Västfjäll, Barradas, & Silva, 2008) and the prevalence of background music listening, wherein music is rarely the primary focus of attention (Greasley, 2008; Greasley & Lamont, 2011). The use of music to accompany non-musical activities played a central role in some participants’ enjoyment of these activities. For example, Dan chose specific music to enhance his enjoyment of electronic gaming, an activity for which he had spent time constructing playlists of preferred music.

So when I'm when we're playing Dungeons and Dragons and I'm the one that's the storyteller I have all sorts of sounds and music and stuff like that to give it an atmosphere (Dan, 21)

Another common function of music was its role in self-regulation. Participants acknowledged that music fulfilled a variety of therapeutic roles relating to mood-regulation, emotional responses to music, and feeling relaxed or energised. Participants mentioned the use of music both to reflect or enhance their current mood, and to alter or improve their mood. David referred to music's ability to achieve a particular mood for a specific purpose, such as preparing for a night of clubbing.

I think whether you've got a visual impairment or not it helps to get you in the right sort of moods... You know if you're going out clubbing or something, listen to some music that gets you in the mood for clubbing (David, 30)

Participants also commented on emotional associations with music and its role in evoking or expressing emotions. Dan chose to listen to specific songs for their ability to invoke a positive emotional response.

Dan: Yeah. Mr Blue Sky is my happy song
Claire: Oh that's a good song, and a good happy song
George: That's a good song!
Dan: And Pork and Beans by Weezer

Dan's labelling of this music as his 'happy song' evidences his deliberate and conscious use of music to meet psychological goals relating to emotional regulation. In contrast to choosing specific music to meet goals relating to emotional regulation, Sarah gave a more general account of the impact of engaging with music through singing.

If I'm sad I just listen to music really, any music, I just listen to something I can sing to and that makes me feel better (Sarah, 20)

Several participants commented on the use of music to feel relaxed or energised, reflecting the arousal-based functions identified in past research (Juslin & Laukka, 2004; Lonsdale & North, 2011; Schäfer & Sedlmeier, 2009). Lonsdale and North (2011) observed that individuals use music to regulate their level of arousal throughout the day, dependent on the context and activity at hand, such as getting ready to sleep, waking up in the morning, or exercising. In the current study, Trish observed that she listened to classical music when carrying out academic work because the relaxing nature of this music aided her concentration.

Well I mean actually sometimes I... listen to classical, CDs, that's very good for me to relax and to be able to work on, it helps me to focus more on my work when I listen to music (Trish, 39)

Gail also specified a particular type of music for relaxing ‘Soft, nice soft music is relaxing’, whilst Dan spoke about the music he chose to listen to before and during exercise. He considered music to be an integral part of his enjoyment and success at the gym.

Music gets you just pumped, I guarantee with the gym I wouldn’t be at what I am now without music ‘cos otherwise I just have no motivation, and I’ll just play like the Hives and I’ll be like YEAH I can do this now (Dan, 21)

Literature highlights the important role that music may play for individuals engaging in physical exercise. Much of the research in this field has been carried out with professional athletes (Jarraya et al., 2012; Karageorghis, Terry, Lane, Bishop & Priest, 2012), but as with Dan, music has also been found to have a positive impact on the enjoyment and motivation of untrained or amateur athletes (Edworthy & Waring, 2006; Mohammadzadeh, Tartibiyani, & Ahmadi, 2008).

It should be noted that participants did not choose the same styles of music to meet arousal-based goals. For example, participants listened to a range of popular styles, including jazz and pop, or used specific radio stations, to feel energised. Greasley (2008) reported similar findings, stating that the music that people choose to achieve psychological goals varies greatly; what is relaxing or energising for one person may not be for another.

The role of music in self-regulation was also recognised as having therapeutic benefits. David had turned to music-making as a means of coping with anxiety during his teenage years, ‘when I was stressed or anxious or down I’d just pick up the guitar and start playing’. The importance of music to meet therapeutic goals at this time is perhaps not surprising given the findings of past research, which highlights the role of music listening and participation in meeting positive well-being outcomes across all age groups (Creech, Hallam, Varvarigou, McQueen & Gaunt, 2013a; Laukka, 2007; Miranda & Gaudreau, 2011) and the importance attributed to music during adolescence (North et al., 2000; Saarikallio & Erkkilä, 2007). MacDonald (2013) suggests that music listening may be used to meet goals relating to self-regulation, which offers the listener therapeutic outcomes; the use of music to ‘feel better’ was reported frequently.

Next, music was reported to serve social functions. For example, some observed that opportunities for both music listening and live event attendance came about as a result of time spent with friends or family members. Gail’s daughter was involved in multiple ensembles which meant regular attendances at live performances for Gail, whilst Jessica’s family, both during childhood and as a grandparent, were a significant influence on her musical life.

I’ve got a big family and there’s always music going on, one’ll come in who’s playing different music to others. This always gets me going. And I’ve always sung and danced and things like that from being a little girl, from being about three year old. I’ve had bigger brothers and sisters, sisters and they all dance (Jessica, 97)

Will also acknowledged the influence of friends and family members on his musical engagement. Following his grandfather's work as an orchestra conductor and the head of a music and drama college, and his father's work as a musician, Will considered his interest in music to be inevitable.

I mean my father's got an entire room in his house full of guitars so that's where I spend most of my time... when you're young you're like, ah cool Dad's rocking out, and you know you want to join in and then you start learning these things (Will, 16)

Qualitative research by Lamont (2011) found that family influence was a common theme in discussions relating to musical identity. Similarities can be seen with the comments of one participant in Lamont (2011) who viewed music as part of their family and cultural heritage, 'just something that one did' (p. 373).

In addition to social influences, participants observed various experiences which demonstrated music's role in facilitating social cohesion. Faye suggested that shared interests were an important factor in developing bonds with new acquaintances at live music events; 'if you like the same music you've got somebody on the same common ground, a topic to talk about, it's quite a good conversation starter'. Packer and Ballantyne (2010) demonstrate that opportunities to meet like-minded people may contribute positively to the well-being of young attendees such as Faye. In contrast, participants in one focus group at the SRSB discussed their role in establishing the organisation's singing group, which had offered Harry and Jessica opportunities to meet with friends to chat and sing.

Jessica: Harry and I and Nel weren't it... And Nel had been on the stage, she knew a lot of things like that and we start... and Betty, and we started jiggling and singing old songs... So we said, well make a little group, and we got a little group. Then we just used to sit and sing didn't we, then David came here... And he got us, he got us going properly... we we were all just sitting down and gassing and having a sing song

Harry: A social like weren't it

Harry and Jessica's comments illustrate the cohesive nature of the singing group, and the growing sense of togetherness which had developed. Literature highlights the positive impact that group musical participation may have on well-being in older adults, enhancing people's social, emotional and cognitive well-being through opportunities for creative expression, achievement and enjoyment (Creech et al. 2013a). Furthermore, Livesey, Morrison, Clift and Camic. (2012) found that choral singing offered older adults a sense of belonging, a benefit which was reflected by participants in the current study.

The opportunities that music provided for reminiscence were also important to elderly participants, a function of music which has been found to contribute positively to the

psychological well-being of this group (Bohlmeijer, Roemer, Cuijpers & Smith, 2007). Memories relating to music and dance were particularly common. In one focus group, discussion regularly turned to these connections and participants' experiences at social dances. When I made this observation to the group, the following exchange ensued:

- Gail: Well, well it's the music in't it as well
- Claire: Yeah it seems that the music is an integral part of that for you
- Jessica: Well, music gets your feet going dance, dancing
- Gail: It does, if you've got rhythm you're always, I'm always like that
- Harry: Well one of my legs, one my legs going the other one won't work
- Jessica: I don't dance much now but I can wriggle my bum out the seat

For this generation, growing up during the birth of youth culture in the 1950s, social dances had played a central part in their lives (*cf.* Muggleton, 2005). For some of the older participants, music and dance continued to be viewed as unified concepts. Similar findings were reported by Clark, Baker and Taylor (2016) in their investigation of music listening during walking-based rehabilitative exercises in older adults. Participants (aged $60 \leq$ years) in their study described how music evoked nostalgic memories, including those relating to dances, films or musicals, offering feelings of emotional and physical connection to their past, more physically able selves. Music fulfilled a similar function in the current study, offering the opportunity for participants to transcend their current state of mind and body, and to feel energised.

Finally, whilst less prevalent in the data, the themes of 'Accessible hobby' and 'Occupation' warrant some brief discussion here. As discussed above, it was apparent that music was an important pastime for many participants. However, George suggested that music's role in providing a hobby was perhaps of even greater importance to those with a VI, given perceived limitations on engagement with other activities.

Playing sports was never a big go for me, I did rugby, I was a person that point me in the direction and just say run... And that was it and it was great because they'd always get out the way (laughs) except for that one time where I broke my nose...because of that sort of thing, music and sound in general is just more important (George, 17)

Similarly, Lilian, who had a SI, commented on the importance of music in offering an alternative to activities which required sight. 'Well, [I listen to music] quite a bit a day, just to give my eyes a rest from ya know, reading all the time'. For individuals living with a VI, music may be perceived as offering important opportunities for recreation and relaxation, particularly for those using a limited amount of residual vision to complete daily tasks.

With regards to the theme 'Occupation', a small number of participants acknowledged the relevance of music to their current vocation or future job prospects. For students at

the RNC, for whom music production was central to their studies, the theme of musical engagement through vocation was particularly pertinent. Students commented that their studies were important in developing skills for future employment in music production. Furthermore, Will expressed beliefs regarding music as a source of job opportunities, with musical domains being perceived as an accessible occupational field.

I never really had much of the job options as most people... But music was the one thing that I really kicked off on and continue to do so (Will, 16)

Given the challenges that young people who have a VI have been found to face in relation to employment, including a lack of guidance regarding possible career opportunities and generally lower employment rates than typically sighted peers (Bell, 2012; Gold, Shaw & Wolffe, 2005), this theme may be of particular significance to the experiences of these individuals.

4.6.3 Technological engagement for music listening

Younger participants reported using a variety of different technologies, including smartphones, tablet PCs, laptops, and desktop computers. Their technological engagement was highly idiosyncratic, with devices being chosen to meet specific needs. A small number of older participants also commented on the usefulness of specific technology in different contexts. Trish for example, commented on the use of her MP3 player (iPod) for accessing music on-the-go, 'I do like listening on my iPod when I'm out... or when I'm travelling really'. Here, the device's portability was an essential consideration.

Older participants reported listening to the radio regularly; music-related programmes or channels on the television were also popular, which supports previous research showing that older adults frequently listen to music via TV and radio (Flowers & Murphy, 2001). However, it is perhaps surprising that television use was so high amongst the current sample, given their limited access to visual content. Lilian cited her preference for the radio because of the musical variety that it offered, 'I keep flicking through to see what's on'. Accounts from elderly participants suggested that technology was a domain they had little experience or interest in. Phillis viewed the simple task of using a radio as challenging, 'I wouldn't put the radio on because I'm not a very, I've never been very brilliant with things', whilst questions regarding technology for music listening were considered laughable by Eleanor.

Claire: Have you ever felt unable to access music at home, for example, technology, using technology to listen to music

Eleanor: No we're not that, my husband's, no way! (laughs)

Claire: Yeah, just doesn't happen?

Eleanor: It doesn't!

Previous research has shown generally low levels of technological engagement in older adults due to factors such as cost and accessibility, perceived difficulty, resistance to change and disinterest (Age UK, 2009; Broady, Chan & Caputi, 2010; Selwyn, 2004). Reflecting this, David, who had worked in SRSB for several years and had a severe VI, observed that individuals at the centre often chose to use outdated forms of technology, resulting from a sense of familiarity and comfort. This was a challenge relating to technology in general, not just music listening.

I know a lot of people that have stuck to their old ways of playing music say on CD players they'll have loads of or even people still having tape cassette players... They didn't want to move on with technology... I mean not just with music... There were still quite a few people that have audio books on tape cassettes and still use tape players all the time. And so when it comes to new technology even CD players that aren't that new there's still quite a few people that don't really want to use them (David, 30)

Although participants were not specifically asked about their music collections, it became apparent that for a few, the size of their music collection was a means of demonstrating their level of musical engagement and interest in music. Most younger participants described a digital music collection, stored on a computer or laptop. These participants tended to download music online on a computer, laptop, or portable device, or via an X-box. Sarah spoke about her collection in terms of songs rather than albums, quoting an approximate number of songs in her collection. This reflects existing literature's suggestion that music consumption has become a singles-, rather than an album-based experience (Avdeef, 2012).

I have one on iTunes, it's on about one thousand four hundred songs at the moment... it gives me an exact count if I just look at it... the majority of the time if it's a new thing, if it's a new song I like I will buy it on iTunes... I tend to just stick to singles because there's always that one song, or one or two songs on an album that I don't like and I don't think it's worth paying the full album for so I just stick to singles (Sarah, 20)

For most older participants, and some of the younger participants, CD collections were typical. Gail commented on the perceived benefit of the quantity of music available on a CD, 'CDs mainly because you know, there's a lot on the CDs', which was perhaps surprising given the relatively small amount of music available on a CD compared to other more contemporary formats. This suggests a lack of knowledge relating to benefits of newer forms of technology.

In addition to music collections, several young participants commented on their use of subscription services, video streaming sites, or television music channels. Perceived benefits of these sources included convenience, and their role in discovering new music. Spotify was also used as a means of creating and managing playlists.

4.6.4 Live event attendance

Attendance at live events was generally low amongst participants, most reporting only occasional attendance. Participants from the RNC primarily attended events through the college; these events were typically low cost, and as students of a music-related course, attendance was sometimes compulsory. With regards to performances outside the college, cost and time constraints were cited as reasons for low attendance, although one participant, Dan, had attended a range of different events.

Several elderly participants reported that their engagement with live music had decreased over time; difficulties associated with age, mobility, and finding the practical support to attend were cited. As Jessica commented, 'It's just that there's nobody really to take you'. Some acknowledged that they would like to attend more events, but others expressed little interest in this activity.

- Me: Do you feel like you'd like to go to more live music, do you think you'd enjoy going out more you just don't get the chance?
- Jessica: Ooh yes, yes, yes
- M: No don't bother me

The above responses demonstrate that interest in engaging with live events varied across participants, although most viewed attendance at live events as an enjoyable activity, which was often associated with spending time with friends and family.

The above sections have provided an overview of the musical engagement of focus group participants. Discussion has explored data regarding the first major research question set out in Chapter 3, to explore the musical lives of adults and adolescents with a VI. In the following sections, discussion considers the potential impact of VI on musical life, progressing through experiences with recorded music, live music, music-making, and sources of help and information, and identifying the challenges experienced in relation to these activities.

4.6.5 The impact of a visual impairment on engagement with recorded music

As discussed above (Section 4.7.3), most participants were engaging with recorded music regularly. Whilst discussion did not often turn to accessibility, some did express a preference for some devices over others. Several of the young participants reported a preference for portable devices produced by Apple, and many used iPhones or iPads to access music. As Alex commented, 'I think Apple products for assistive technology is very good'. In contrast, and as discussed above, familiarity appeared to be the most significant factor influencing device choice for elderly participants. It was also apparent that factors relating to VI could create difficulties in relation to technological engagement. Trish, for example, reported challenges when attempting to access new

music. She observed that whilst she preferred to buy music online, accessing music in this way was difficult due to the poor accessibility of download sites.

Again this [music downloading] is very inaccessible because most sites are not very accessible... So again I'm dependent on my partner and my P.A.s to help me out with my music (Trish, 39)

Having a sighted individual available to help, particularly where online payments were needed, was essential to accessing new music online. Trish recognised that this level of assistance might not be available to everyone and considered herself in a 'fortunate position' to have a partner on whom she could rely for this support.

Accessing basic written information such as song titles was also problematic. Gail commented on her inability to read the information on CD sleeves, 'If it's very big print I can but not if it's very small print, no... You live with it'. Gail's final comment suggests that she felt there was no way of overcoming this challenge; such experiences may have significant implications for individuals' continued engagement with music following sight loss.

Irene relied on family members to purchase CDs as she herself was unable to access written information on albums, 'family buy me them [CDs] and they're usually ones that I like anyway'. Irene viewed this reliance on others as necessary, although her comment that these CDs were 'usually' albums that she liked suggested that her music collection may not wholly reflect her preferences. Reliance on others may contribute to the feelings of loss of independence which are often associated with sight loss (Good, LaGrow & Alpass, 2008; Papadopoulos et al., 2014; Senra et al., 2015). Furthermore, research shows that greater levels of musical choice during a listening experience typically leads to greater positive psychological outcomes (Liljeström et al., 2013; Sloboda et al., 2001). Irene's lack of choice over her listening experiences could impact negatively on the use of music to meet psychological goals.

For Sarah, not being able to read track lists on CD sleeves also presented a challenge, but she was innovative and persistent in her use of technology to overcome this difficulty.

If it's an older song whack out like a load of our vast collection of CDs just sort of here and there in drawers so I'll go and rummage through all of those and see if I can find a CD with it on... It's an absolute nightmare cos I can't read the song list! But I'll stick the song in the laptop and I'll listen through them... if I stick it in my laptop and my WiFi's working it'll give me the track titles... because I have a magnifier on the laptop I can read it there. So it's a little bit longer than just picking up a CD, looking at the back and then putting it back but it works for me (Sarah, 20)

Comments from Trish indicated that for individuals who have VI and an additional disability, the challenges faced in relation to technological engagement may be even greater.

The machinery is inaccessible unless you're prepared to pay [for] very expensive machinery off RNIB and specialised companies. Mainstream machinery is quite small and tiny and you won't be able to see or to use my hands to turn it on turn it off... I mean it's not ideal really you know it's quite difficult to make work (Trish, 39)

Research has found that a VI may influence the ease with which individuals use technology (Gerber, 2003; Murphy, Kuber, McAllister, Strain & Yu, 2008), particularly with regards to touchscreen devices (Hakobyan, et al. 2013; Kane, Bigham & Wobbrock, 2008). For Trish, reduced motor skills resulted in additional difficulties using a portable device. Studies have found that mobile device interfaces can be largely inaccessible to people with visual and motor disabilities due to their being un-ergonomic and having small or undifferentiated keys (Kane et al. 2009). In addition to the compounding effect of an additional disability on technological engagement, Trish also raises the potential issue of cost. Her comments reflect a common theme in existing research: the generally high cost of assistive devices compared to mainstream devices (Borg, Larsson & Östergren, 2011; Foley & Ferri, 2012). Trish recognised that specialist devices may meet her needs better, but cost was a barrier to their use.

4.6.6 The impact of a visual impairment on engagement with live music

As discussed in Section 4.7.4, engagement with live event attendance was generally low amongst the sample. Factors relating to time constraints and cost, and for elderly participants, reduced mobility, all impacted on attendance. Barriers associated with the idiosyncrasies of participants' VIs were also apparent. For example, Sarah commented that the light sensitivity and mild epilepsy associated with her condition meant that live events were not a safe or enjoyable environment. Dan's Retinitis Pigmentosa, resulting in night blindness and reduced peripheral vision, made attending live events a challenge.

David observed that a VI could also impact on attitudes towards live music attendance; not being able to see where things are in a venue was considered potentially off-putting, particularly for those who had little experience of live events. As with engagement with music through technology, familiarity affected confidence at live events. David acknowledged that this factor had impacted on his attendance of events in the past.

There are certain times where say going to gigs of something I haven't gone purely because I didn't really fancy going to a place I didn't know, when I couldn't see where things were... especially when you haven't gone to see many gigs or anything, they can be intimidating almost at first in a massive crowd of people (David, 30)

David commented that this barrier was true of all venues which play loud music, including bars or pubs. This factor added to the existing challenge of navigating in a new environment.

So going somewhere where your senses are overwhelmed with the music... And you still don't know where things are... I mean it's like at gigs or out clubbing um, a visual impaired person all of a sudden goes deaf, just about (David, 30)

David's comments introduce the concept of sensory overload, described in the literature as the brain being unable to manage input stimuli, leading to a variety of negative consequences such as confusion, frustration and withdrawal (Dewing, 2009; Jones, Quigney & Huws, 2003). David believed that having a VI compounded the difficulties associated with auditory processing in noisy environments, leaving him feeling overwhelmed. Heine and Browning (2004) note that loud background noise can be a barrier to verbal communication for those who have a VI; difficulties maintaining a conversation might also contribute to apprehension relating to attendance at events. David was the only participant in this study to comment on the impact of psychological factors on decisions to attend events but participants in subsequent studies highlighted similar challenges relating to live event attendance.

Participants also reported difficulties associated with the accessibility of live events. Practical difficulties included the logistics of attending an event and the physical environment at venues. Dan observed that safely moving around a live venue could be a challenge due to physical barriers, 'making your way through there and stuff, I don't know where tables or chairs are or steps'. For elderly participants, issues of mobility and access to transport were most apparent. Jessica commented that attendance at concerts relied on the availability and willingness of others to take her to events.

It's just that there's nobody really to take you because, the simple reason they're either doing their own thing or they're going somewhere different... So I never push. I'm always open for offers but I never push. But I get plenty (Jessica, 97)

Jessica's inability to travel independently, due to both age and VI, impacted on her attendance at events. The cost of both transport and tickets was also cited as a barrier to attendance.

If you want to go anywhere to a live concert, if like Phillis and her husband, neither of them can drive so therefore they've no family, so you've got to have a taxi, so that puts double money on to your ticket (Irene, 90)

Here, Irene highlights that the impact of not being able to drive is twofold, resulting in a reliance on public transport and subsequently, an increased cost in attendance. Trish observed that not only money, but also issues associated with time, due to additional challenges resulting from her physical impairment, were critical in decisions regarding live event attendance.

I think um there are lots of good musicians coming to Leeds and I would like to go and see them. However, money's quite a big... And also time as well because it takes us, takes me longer to get ready and to go to the bath and I'm a disabled person so I think time and money are the two crucial points really (Trish, 39)

Once again, additional disabilities can be seen to increase the difficulties experienced in relation to musical engagement by individuals who have a VI.

The issue of personal security was also raised. Lilian and Irene agreed that the ability to go to events at night was hindered by a lack of perceived safety due to sight loss.

- Irene: And then, I wouldn't go at night anyhow, I mean it's not safe to go to places when you're on your own and you can't see
- Lilian: No, obviously I won't go out by myself either
- Irene: No but that's another obstacle. People don't always realise that you cannot go out of your own front door to go to anything

These comments reflect research which shows that individuals with a VI may experience feelings of vulnerability and concern for personal security in unfamiliar surroundings (Yau et al., 2004). The increased risk of falls associated with VI may also reduce feelings of safety (Norgate, 2012).

With regards to the venues themselves, Trish observed two difficulties that she faced. Firstly, the challenge posed by steps, a sentiment shared by Irene. Once again, additional mobility difficulties resulting from disability and age creates additional challenges for attendees.

I mean I don't know if you know the HiFi in town... there's quite a lot of steps... and there's been a couple of gigs I want to go and see but I can't go because of the steps really (Trish, 39)

Usually if you want to go anywhere you'll find there's an awful lot of steps (Irene, 90)

Secondly, whilst Trish enjoyed attending the opera, she noted that surtitles are inaccessible for VI visitors, 'I can't read the subtitles... and there's no alternative for visual impairment'. A lack of access to materials and information is an obvious hindrance to the enjoyment of VI attendees. Trish was the only participant in this study to comment on this issue in relation to operas, although as discussed in Section 4.7.6, difficulties accessing written materials were apparent in relation to recorded music experiences. Furthermore, participants in subsequent studies continued to highlight the difficulties of accessing written content, including opera surtitles and performance programmes, at live events (see Chapters 9 and 12).

4.6.7 The impact of a visual impairment on music-making

Several of the participants in the current study were involved in music-making, including solo and ensemble instrumental playing and singing. However, those with late onset sight loss reflected on a reduction in music-making resulting from their VI. For Edith, the loss of her sight had been detrimental to her instrumental playing.

I've got my fellowship for the Victoria College of Music which of course that was a long, a long time ago when I got that. And I've taught music and I can't play now because I

can't see the dots ...all my life, during the Second World War I was doing voluntary entertainment service and I went to entertain the troops, well it's a different story now when you can't see to play it breaks your heart really (Edith, 92)

Edith appeared to be resigned to the loss of what had previously been a huge part of her life. Research exploring the experiences of musicians with hearing loss suggest that such a loss may negatively impact on the psychological health of these individuals (Hasson, Theorell, Liljeholm-Johansson & Canlon, 2009; Stormer, Sorlie, Stenklev, 2017). Edith's comments suggest that a VI may pose a similar risk to musicians.

In contrast to Edith's lifelong playing, Gail had recently begun learning to play the electric organ, which she viewed as a laborious process due to difficulties reading sheet music.

I've got an electric organ from down, back down the family. I can play it with one hand, trying to play with my second but because you've got your music there, even with my magnifying glass I have to look at that and look at what note it is and then play it and then look at the place... And it's driving me mad (Gail, 90)

Taking up an instrument in adulthood is often associated with physical challenges due to lack of dexterity and control, which can lead to frustration (Gaunt & Hallam, 2016). For non-Braille music readers, devices such as The Lime Lighter from Dancing Dots (a Braille music technology company), which enlarges and navigates digital scores, may be beneficial to those who read musical notation, but the cost of this device is substantial. The Lime Lighter was priced at \$2,995 (correct as of March 2019, www.dancingdots.com). Furthermore, participants in the current study were not aware of this technology.

4.6.8 Accessing help and information

When asked about access to information relating to musical engagement, few participants had thought, or been asked, about this topic. Participants had difficulty pinpointing sources of information and even for those who demonstrated a high level of musical engagement, information about music or events tended to be gained through word-of-mouth from friends, family or colleagues. The radio was also used as a chance source of information.

One of my friends he does a radio show and one of their features is what gigs are coming up and so he'll tell me about a lot so it is more though other people hearing (David, 30)

One of our mates is very much into like the whole knowing about festivals and music... so he would then text us all, let us all know going event, up for it?... Other than that, I've no idea. I went to a couple of gigs, punk gigs with my dad and then he just like hears about them, so it's very rare for me to actually go, oh there's an event going on it's just a case of I'm not entirely sure where to look other than if it's posters when I'm walking through town and I pass the venue (Dan, 21)

Participants' reliance on the knowledge of others, and chance information from local radio stations suggests that information regarding upcoming events may not be available in an accessible format. David suggested that information about upcoming events, particularly those which are smaller and less costly, is ordinarily difficult to find due to a lack of advertising.

There used to be one place where you could go and everything would be listed... at least a week before. Now all the paid things you know, where you're paying fifteen twenty pounds to go to a gig are all listed months before but the cheap things where you're paying a fiver or even three, they're not listed most of the time (David, 30)

Trish felt fortunate that she was able to access information about musical events with Audio Description (AD), a service which provides a performance commentary for audience members (Audio Description Association, 2019). Trish received help from her partner to source information but, as with Trish's comments relating to recorded music, she recognised that not everyone has access to this support.

Fortunately I'm quite well connected really and so is my partner so we do keep an eye on these things and I think he's subscribed to the audio description information so he knows when they're coming to Leeds... But I know that's not an option for everyone, for most people who are not, accessing the internet, I don't generalise my own experience really because it's quite specific and I'm in a fortunate position (Trish, 30)

Whilst discussion of access to information related primarily to live events, the difficulties associated with music-making and the limited experience of new forms of technology (for older participants) suggests that information regarding technology which could improve access to both music-making and recorded listening experiences may also be lacking.

4.7 Summary of findings

This chapter has discussed findings from a focus group study, the first of three studies undertaken in this project. The study provides qualitative data relating to the everyday musical lives of individuals who have a VI. Analysis highlighted several key findings which will help to guide the design of subsequent studies in the current project.

First, whilst many of the functions reported by the participants mirror those found in previous research (e.g. using music to accompany household chores, for pleasure and/or relaxation, for social occasions), the findings suggest that music fulfilled additional roles in the current sample, as an accessible hobby and a source of occupational opportunities. Consequently, it would be useful to see whether these are echoed in the responses of participants in subsequent studies.

Secondly, and reflecting findings relating to general populations, music held a high level of importance to many participants. However, it must be noted that participants may have been

recruited by staff at organisations because they exhibited an interest in music. Subsequent studies must aim to represent participants with a range of musical backgrounds, including those with varying musical interests and levels of musical training.

Next, young participants made use of a range of technology for music listening, but age appeared to impact negatively on engagement and interest in technology. The recruitment of participants at the RNC and SRSB was useful in highlighting the impact of age on technology use, but subsequent studies should aim to explore the benefits and challenges associated with technology use across the adult age range and for individuals with both early- and late-onset impairments.

Many participants spoke of current or past involvement in music-making, including instrumental learning, singing, and ensemble playing. Younger participants cited time constraints as the main reason for their current lack of music-making, however, it was apparent that late-onset VI had negatively impacted on a small number of participants' active musical participation. Exploration of the experiences of those who remain involved in music-making may be useful in identifying the range of barriers experienced by this group and means of overcoming these barriers. As with experiences with technology, exploration of the experiences of musicians across the adult age range, including amateur and professional musicians, would be helpful in offering insight into the factors influencing music-making across the lifespan.

Finally, attendance at live events was low amongst the current sample. Factors relating to cost, time constraints, age, mobility, and VI were all found to impact negatively on engagement with live music. The low incidence of event attendance in the current study makes exploration of the decision-making processes involved in event attendance among a larger sample an important step towards understanding the accessibility of events for VI attendees. Also, there was little discussion of music venues in the current study. A greater focus on venues would provide useful insight into factors impacting on enjoyment and accessibility of events for this group.

4.8 Chapter summary

This chapter has described the first set of data to be collected as part of the current project. As highlighted above, a number of key findings relating to the musical engagement of participants, and the impact of VI on aspects of their musical life have been identified. These findings highlight key areas of exploration which will be used to inform the design of subsequent studies in this project.

5 Study 2- Interview Study

In this chapter, I describe the aims, methods, and procedure of the second study undertaken in this project, a semi-structured interview study. The chapter finishes by outlining the structure of analysis used in Chapters 6-9, which describe findings from the current study.

5.1 Aims

This semi-structured interview study aimed to address two of the three aims set out in Section 3.2. The first, to explore the musical lives of adults and adolescents with a VI, and the third, to consider the impact that a VI may have on access to music and musical experiences. These interviews offered the opportunity to gain a detailed understanding of the musical experiences of participants and further explore themes identified during Study 1.

5.2 Method

5.2.1 Recruitment

Participants were recruited through convenience sampling. This included contacting representatives of organisations involved in recruitment for Study 1, who sent emails to members on my behalf (see Appendix H for sample recruitment email). A range of organisations and charities were contacted in order to reach potential participants who varied in age, experience of VI, and location. Given the negative psychological impacts of VI evidenced in individuals across the adult age range (see Section 2.1.3), accessing the views of individuals of different ages was considered an important goal of recruitment. An information sheet was emailed to organisations to supply potential participants with adequate information about the study to make an informed decision regarding their participation (see Appendix I for information sheet).

5.2.2 Conducting the interviews

Participants received an information sheet prior to participation. This was either supplied by the organisation of which they were a member, or by me. The majority of interviews were organised by email and a small number requested arrangement of the interview by phone.

Informed consent was obtained prior to participation. All participants chose to give verbal consent; the consent form was read to participants who responded verbally, and the form was completed, signed and dated by myself prior to the interview (see Appendix K for a copy of the verbal consent form). The consent process was audio recorded. At the end of the interviews, participants had the opportunity to ask questions about the research or their participation.

Where possible, interviews took place in the homes of participants. This was useful as it allowed participants access to their technology and music collections should they wish to demonstrate their use during the interview. The home environment was also viewed as

preferable in facilitating a relaxed and open discussion with participants. Eight interviews were carried out in the homes of participants, one interview was carried out in a participants' workplace, and another was carried out at the home of a participant's parents. The remaining ten interviews were carried out over the phone or Skype.

Interviews were audio recorded and were transcribed verbatim. For those interviews carried out in the homes of participants, a digital voice recorder was used. Interviews carried out by phone were recorded using a telephone microphone in conjunction with a digital voice recorder, and those carried out via Skype were recorded using built-in recording software on a laptop PC.

5.2.3 Interview schedule

An interview schedule was developed based on findings from the focus group study (see Appendix E for interview schedule). This included exploration of the use of technology in music listening and experiences with live music events which, as discussed in Chapter 4, Section 4.8, were topics requiring further investigation with a greater number of participants. The schedule was used to guide the interviews through the topics outlined in Table 5.1. It should be noted that whilst questions relating to associations between VI and musical ability required participants to express opinions and beliefs (some comments were purely speculative), participants were asked to explain these beliefs and to discuss any experiences which had informed these views. The final question offered participants the opportunity to mention anything else of importance, allowing for expansion on earlier comments, and ensuring that they had shared everything that they wanted to.

Table 5.1: Topics explored in the semi-structured interviews.

1. Everyday musical engagement
2. Engagement with music across the lifespan
3. The use of technology and access to music at home
4. Live music experiences
5. Participants' beliefs and preconceptions relating to the concept of "blind musicianship"
6. Participants' beliefs and preconceptions relating to the concept of auditory processing in visually impaired individuals
7. The importance of music, past and present

This interview schedule was used flexibly, reflecting the natural flow of the conversation and the relevance of topics to participants' experiences. Flexibility in the use of the interview schedule was important in enabling me to adapt the interview to the individual through processes of omission, rewording or explanation (Robson & McCartan, 2016). This was

particularly important for the current sample, for whom different experiences of VI impacted on the relevance of some questions (e.g. questions regarding experiences with music before and after sight loss were only relevant to those with a late-onset impairment).

5.2.4 Process of analysis

The interview transcripts were analysed using Interpretive Phenomenological Analysis (IPA). This approach was a useful means of exploring participants' personal accounts and lived experiences, reflecting the focus of this stage of data collection on the personal experiences of participants (Pietkiewicz & Smith, 2014). Analysis proceeded in line with the phases set out by Smith and Osborn (2008). This process began with numerous readings of the first transcript; initial annotations were made in the left-hand margin. Following this, the transcript was read through again, and the other margin was used to document emerging theme titles. Initial notes were transformed into concise phrases, moving the interpretation to a higher level of abstraction. A primary concern at this stage of analysis was the ability of the themes to adequately represent the words and experiences of participants. As such, a sample of the dataset (four interview transcripts) was cross-examined by an independent researcher who had experience of qualitative data analysis. No divergences were identified during this process, which provided support for the emergent coding framework. Next, the emergent themes were listed and organised into groups of similar themes. I used the software NVIVO to collate phrases from the participants that supported the themes, in order to check that the connections I had made functioned for the original material. The process was iterative, whereby the researcher aims to make sense of what the person is saying, but at the same time constantly checks this sense-making against what the person actually said (Smith & Osborn, 2008). An ordered table of themes was produced. Each cluster of themes was named (superordinate themes) and the themes which went into each cluster listed below. This process was used to analyse each transcript in turn, using the themes from the first case to help orient the analysis process. The emphasis at this stage was to highlight clear convergences and divergences in the data. Once each transcript had been analysed, a final list of themes and superordinate themes was constructed (see Appendix L for full list of themes).

5.2.5 Structure of the results

As highlighted in Chapter 2, the experience of VI is variable from person-to-person. Thus, whilst it is useful to consider those experiences which are similar across multiple participants, experiences which are exclusive to one individual may also be important. The following analysis aims to discuss both commonalities across the sample, and those experiences which were unique to individuals. This reflects Smith and Osborn's (2008) suggestion that selection of themes within IPA should not be based purely on prevalence, but also on other factors, including the richness of data, and how a theme might illuminate other aspects of an account.

Chapters 6 to 9 progress through a discussion of the main themes identified in the current study (Table 5.2 outlines the structure of this analysis).

Table 5.2: Overview of analysis presented in Chapters 6-9.

Chapter 6 Everyday musical engagement
Level of musical engagement
Musical engagement during childhood
Factors impacting on musical engagement (unrelated to VI)
Importance of music (and importance of music ‘because’ of VI)
Impact of VI on listening experiences
Functions of music
Chapter 7 Using technology to engage with music
Technology in everyday life
Types of devices
Physical music collections and limitations of older technologies
Impact of technological developments and limitations of new technologies
Factors influencing technological engagement
Chapter 8 Music-making & professional music careers
Music-making during childhood
Current music-making and functions of music-making
Factors impacting current music-making (unrelated to VI)
Impact of VI on music-making
<ul style="list-style-type: none"> • Professional music career and performing
Sheet music and psychological impacts
Chapter 9 Attending live music events
Factors influencing attendance at live music events
<ul style="list-style-type: none"> • Practical considerations and the music • Impact of VI
Factors influencing enjoyment at a live music event
Functions of live music
Attending live events as a disabled attendee
<ul style="list-style-type: none"> • Accessing information and purchasing tickets • VI as a disability • Use of specialist services and disabled facilities • Staff • Navigation and orientation
Psychological challenges

Chapter 6 provides an overview of participants’ musical engagement, including a consideration of engagement across the lifespan, factors impacting on engagement, and the functions fulfilled by music. Chapter 7 addresses technological engagement, exploring both participants’ use of technology in general and the experiences, barriers, and challenges associated with technological engagement for music listening. Chapter 8 focuses on participants’ music-making, including past and current engagement with music-making, the functions fulfilled by

music-making, and factors impacting on music-making. The latter includes a consideration of the impact of VI on the experiences of both amateur and professional musicians. Finally, Chapter 9 explores the live music experiences of participants, exploring factors impacting on attendance and enjoyment, the functions associated with event attendance, and accessibility of events for VI attendees.

5.3 Chapter summary

This chapter has described the aims and methods of the semi-structured interview study. It has also outlined analysis of the data which is presented in Chapter 6-9, which aims to demonstrate the breadth of musical experiences and interests of participants, and highlight any potential difficulties relating to musical engagement.

6 Study 2- Everyday musical engagement

This chapter explores interview participants' everyday musical engagement, beginning with a consideration of engagement across the lifespan and the importance attributed to music, before considering the functions fulfilled by music. This chapter gives an overview of musical engagement and music listening in the sample but does not explore music-making and live event attendance; these topics are returned to in Chapters 8 and 9.

6.1 Musical engagement across the lifespan and the importance of music

Overall, participants in the current study were highly interested in music as a hobby, and some as a past or current occupation (see Table 6.1 for overview of participants' musical and technological background). Participants were involved in various musical activities, including listening, singing, ensemble playing, and attending events. It should be noted that, as with Study 1, the self-selecting nature of the sample may have resulted in a high number of musically engaged participants.

For many, music had been important during childhood. Engagement with recorded music technologies stood out as formative childhood experiences for Hayley, Adam, and Ben.

On my eleventh birthday I think it was, my mum bought me a radio cassette player... I mean to you it probably seems crazy but that was revolutionary technology at the time... it went everywhere... it was just lovely to be able to play, and I listened of course to all sorts of stuff and had the radio and that, at that time, that was how I did it (Hayley, 53)

Hayley noted that this engagement in music was not only important in providing enjoyment, but also educational opportunities. She commented on the process of collecting and alphabetising her music collection, 'in a way it was a project... it was teaching me how to organise things'. Adam recalled a similar attachment to his father's cassette recorder, on which he had been able to record his own singing. He suggested that, whilst not exhibiting any particular musical skill at this time, he did have a clear interest in musical stimuli.

I've got a really odd memory... I can remember like just stupid stuff like being at school and always hearing rhythms, I remember once walking down to the assembly behind the teacher and sort of clapping with the feet and hearing a tune in my head [laughing] (Adam, 37)

Ben's early interest in music revolved around a fascination with radio, production and recording. This included impersonations of DJs and an interest in his father's recording technology, 'I used to wreck all the tape recorders and my dad used to get really angry with me... I must have broken so many tape recorders rewinding, reversing, rewinding and reversing'. Engaging with music in this way had provided Ben with a fun and accessible hobby during what he described as a 'sheltered childhood'.

Table 6.1: Interview participant overview

Name	Age	Visual impairment	Musical background	Technological engagement
Mike	41	Degenerative eye condition present since childhood (rapid deterioration in recent years)	Avid listener (amateur musician in the past)	Confident technology user. Background in music technology.
Laura	45	Degenerative eye condition which had worsened during stressful and tiring periods of her life	Full-time professional musician	Technological able (although attributed technology in the house to her husband).
Sophie	20	SSI since birth	Current amateur musician	Technologically engaged. Former collector of CDs and convert to online music listening through video hosting and streaming services.
Victoria	55	Degenerative eye condition present since childhood (impact was greatest from age 40 onwards)	Avid listener (amateur musician in the past)	Interested in technology but struggles with new technologies (relies on her adult children for support in this area).
Adam	37	Degenerative eye condition present since childhood (rapid deterioration in recent years)	Part-time professional performance career in the past	Confident technologies users. Teaching career in music technology.
Ben	38	SSI since birth	Avid listener	Technologically able. Producer and presenter of internet radio
Emily	42	SSI since birth	Current amateur musician	Technologically aware but described herself as 'lazy' when it came to her current technological engagement for music listening.
Alison	52	SSI since birth (very small amount of remaining sight)	Current amateur musician	Described herself as not technologically 'savvy'. Proud owner of a high-quality HiFi system but also used a digital 'Olive' (streaming) device.

Name	Age	Visual impairment	Musical background	Technological engagement
Zoe	28	SSI since birth (two prosthetic eyes since childhood)	Full-time professional musician	Engaged in technology. Primarily uses smartphone for listening but had some experience of music technology for production/composition and was 'open to learning about new things'. Self-taught Braille music reader (currently using).
James	55	SSI since birth (slightly more sight up to age 12/13 years, maintains very small amount of light perception)	Current amateur musician	Confident technology user. Works in IT (husband to Eleanor)
Eleanor	53	SSI since birth (very small amount of light perception)	Current amateur musician	Interested in technology. Regular listener of radio/internet radio. Pointed out the couple's early adoption of wireless technology for accessing their music library. Learned Braille music at school (gave up early on)
John	38	SSI since birth	Avid listener	Highly technologically able. Trained in sound engineering. Puts time aside to engage with preferred genres and technology.
Hayley	53	SSI since birth	Avid listener	Competent technology user. Almost exclusively used a smart phone and streaming services to access music.
Jack	57	SSI (sight in one eye, other eye artificial since childhood)	Part-time professional performance career in the past	Limited experience with technology. Primarily uses radio (his collection of CDs and vinyl records are rarely played). Braille music reader (not using).

Name	Age	Visual impairment	Musical background	Technological engagement
Natalie	49	SSI from age 17 months due to childhood cancer	Current amateur musician	Highly technologically engaged (new technologies had usurped the use of a physical music collection). Braille music reader (not using).
Henry	80	SSI since birth	Part-time performance career in the past	Low level of technological engagement for listening (primarily CDs), despite importance of technology during his working life. Current Braille music reader.
Greg	61	SSI and wears two hearing aids	Semi-professional musician	Described himself as not a 'high-tech person'. Found the concept of smart devices and touch-screens confusing. Tended to older technologies with physical collections, and radio.
Lily	60	SSI due to late-onset impairment resulting from undetected tumour at around 22 years of age	Avid listener	Low level of technological engagement (had yet to purchase smart phone) although was hopefully of greater engagement in the future.
Robert	75	SSI since birth (had small amount of vision until age three but this was lost in an accident)	Avid listener (amateur musician in the past)	Low level of technological engagement. Listens via CDs and radio. Braille music reader (not using).
Jim	84	SSI (has had some vision at various points throughout his life)	Avid listener (amateur musician in the past)	Low level of technological engagement. Large CD collection played occasionally but primarily listens to the radio. Braille music reader (not using).

Ben's interest in music and exploration of recording technologies would culminate in the completion of a music technology course during his college education, and a continued involvement in internet radio.

Music-making during childhood had clearly impacted on participants' current musical engagement. Jim, for example, had begun his musical journey whilst attending a specialist school for the blind during the 1940s, where he had the opportunity to learn the piano and organ. He had played up until the removal of his piano due to a lack of space in his home. Jim's current musical engagement consisted of a regimented routine of music listening interspersed with, and accompanying, daily chores and activities.

When I've showered, dressed and come down, I'd turn the radio on and I usually listen to Radio 4 'til my partner comes down, I have breakfast and whilst washing up I turn the radio back on and put it onto Classic FM... after lunch come back into the kitchen, wash up, turn the radio back on again, back onto Classic FM, and that stays on 'til 5 o'clock... we have [our] evening meal in here... straight after that tuning it onto Radio 3, see what the concerts going to be... if I don't like it, back onto Classic FM and that stays on 'til 10 o'clock 'til we go to bed (Jim, 84)

Others provided similar accounts of their incorporation of music into their daily routine, although musical engagement varied from day-to-day, and some participants documented a range of non-musical interests. Participants also acknowledged that engagement had varied across their life, dependent on factors such as family commitments, working life, and experiences with hardship. For example, both Victoria and Laura commented on a lack of musical memories from their children's early childhood.

I had three children in three years, I was really tired so my vision wasn't at its best and I think, I slept through the nineties. Musically I don't have any recollection of anything current, between about ninety-ninety-one and ninety-seven (Laura, 45)

There was a time when it was less important and that was when my children were young and I was a full-time reception teacher... there's a whole gap in my musical memory that's the nineteen-nineties [laughing] you know that's when I was a busy working mum... it's always been important except in really busy chaotic times (Victoria, 55)

Tiredness and the associated reductions in Laura's vision had been a factor in her lower levels of musical engagement. Echoing Victoria's sentiment, Hayley observed that now her children were adults, time which would have previously been spent caring for her children could now be spent on music, 'I've got more time for my music than I would have had when my children were little'. Lily also cited tiredness, along with the perceived effort of finding music to listen to (a factor returned to in Section 7.3.1), as a reason for her current lack of music listening.

When I'm at work and I come home from work I'm usually sort of quite tired... it's just easier to put the radio on than put some music on and I've just kind of got into the habit of that (Lily, 60)

It was noticeable that whilst Lily was currently engaged in music listening less than in previous years, she acknowledged that when she did listen, it was an activity that she enjoyed greatly.

Having just said all of that, when I do get round to putting music on at home then I sort of think, oh why don't I, why on earth don't I listen to music more frequently, because I've obviously got some stuff that I really love (Lily, 60)

Exploring participants' past musical engagement, interviewees were asked to reflect on the importance of music in their lives. One question asked participants to describe a time when music was particularly important to them. Some participants struggled to pinpoint specific occasions, observing that the high level of importance that they attributed to music all of the time made this a difficult task.

Isn't it funny with something that is so pervasive, it's actually interesting to kind of distil that down to specifics (Natalie, 49)

There are times when I've been going through a difficult patch and you might think you would find solace in music but I don't know that I've really done that, because really I'm quite orientated towards music all the time (Robert, 75)

However, others did pick out specific memories, with several recalling the importance of music during times of stress or illness (returned to in Section 6.2). Participants were also asked to reflect on the current importance of music. Most considered music to be highly important, reflecting existing literature which highlights the often-central role of music in everyday life (Laukka, 2007; Lonsdale & North, 2011; Rentfrow & Gosling, 2003). Furthermore, a small number drew a link between having a VI and the importance of music.

I think it's largely because I'm visually impaired that I'm so close and passionate about my music... I often think that if I was fully sighted that I would be creative in some way, either with needlework or painting (Alison, 52)

Music, I just think, for me as a visually impaired person is very very important, cos it just it kind of just helps to engage you with things (Mike, 41)

The comments of Alison and Mike suggest that the functions fulfilled by music, as a creative outlet or a way of connecting with one's environment, contributed to its importance in their lives. The idea of a 'natural' affinity for, or gravitation towards, music was reflected on by several participants. Ben believed that, 'Blind people are very aware musically' and Sophie commented that, 'I think a lot of people who are blind... They do kind of have some kind of connection to music'. For many, the importance of music was related to the role of sound in their lives. Emily suggested that auditory input was of increased importance for those who have a VI, and that this may shape an individual's musical experiences.

You might concentrate on music more because it is an audio format so it might mean something to you if you've got no sight at all you know, so you might really lose yourself in music and love it (Emily, 42)

Jim also suggested that his VI had impacted on his listening experiences; specifically, his ability to focus on finer musical detail, resulting in a more intense musical experience. As someone who had retained varying amounts of functional vision throughout his life, Jim was able to reflect on the perceived differences between listening with and without sight.

I hear more now of the different parts of an orchestra or something like that... I think that's become more acute over the last what, ten years or something like that... and that's what I enjoy about it, it's like digging deep isn't it... Yeah, and you get to learn, 'oh that's coming', you know you're thinking, 'oh that clarinet's coming' you know, when, here, yeah oh yes it's there (Jim, 84)

As described in Chapter 2, research which has explored the musical lives of individuals who have a VI suggests that music may play a more important part in the lives of this group (Park et al., 2015). The importance of sound more generally, and the perceived impact of VI on the music listening experience described above, may offer some explanation for this.

6.2 Functions of music

The most common function of music identified within the current sample was the use of music for self-regulation, identified by 14 participants. This theme included regulation of mood, and the impact of music on emotions and levels of relaxation or energisation. The role of music in mood management and emotional regulation has been heavily documented in existing literature (Castle, 2014; Greasley & Lamont, 2011; Groarke & Hogan, 2016). Music's ability to alter emotional states and provide comfort was particularly important during times of distress. A CD brought to Natalie by a friend during illness was an important distraction from stress and sadness. Similarly, Lily highlighted the importance of music during a hospital stay which had seen the identification of the tumour which had led to her sight loss. This was a period of great uncertainty, but music listening provided a way of working through negative feelings.

You're just kind of lying in bed and thinking about things and being upset... music kind of really helped me get through that... one particular album, a McCoy Tyner album, jazz album, well two really helped me kind of just get through (Lily, 60)

Participants in the research of Baker and Green (2017) recounted similar uses of music to meet emotional and therapeutic needs during ill-health, both related and unrelated to sight loss.

The use of music during activities such as household chores, reading, and working was also common; half of the sample acknowledged listening during these types of activities, reflecting research which has shown that music is often heard during a range of domestic and leisure activities (Greasley & Lamont, 2011; Lamont et al., 2016).

In contrast with the use of music during other activities, concentrated listening was important for a small number of participants. John noted that he actively avoided music listening during other activities and preferred to ‘engage with it properly’. The use of the adverb ‘properly’ suggests that he considered concentrated listening a more valid experience than background listening. Similarities can be seen with the comments of Lily, who observed that music listening during work was ‘insulting to the music’, due to her need to focus on the task at hand. This type of concentrated listening was also associated with knowledge development. Adam, Jim and Henry, who were all musically trained, spent time focusing on different aspects of the music during their listening experiences.

When I'm listening to it, I tend to try and work beyond the, what I would call the melody, and try and listen what's going on behind the scenes you know, with the other parts, with the woodwind or the brass or something like that (Jim, 84)

Research has shown that concentrated listening is not a common activity for most listeners, although those with higher levels of musical engagement may be more likely to undertake goal-orientated listening such as this (Greasley & Lamont, 2011). Hayley, an ‘Avid listener’ with no musical training, also put time aside for this activity. In contrast to those participants with a high level of musical training, Hayley’s focus was not on musical intricacies but on a high-quality listening experience in which she could appreciate the stereo effects of the music.

I like to have a set of speakers and sit in the middle, so I can get all the stereo effects... it doesn't have to happen like that but to get the most out of it that is what I might do (Hayley, 53)

Hayley’s interest in seeking out meaningful, concentrated listening experiences suggests a high level of musical engagement. In contrast, both Adam (experienced musician) and Alison (non-musician) spent time seeking out new music to enhance their music listening experiences. Adam described his efforts to explore the full back-catalogue of the Beatles, whilst Alison took pleasure in the sense of discovery associated with finding new music.

I recently learned about a new modern composer... I heard that by initially being composer of the week on Radio 3 just before Christmas, and I liked that and I thought, oh gosh I wonder what I can get of hers... over the years that's kind of how it happens (Alison, 52)

Alison also spoke about expanding the listening experiences of others. She was happy that her sister had been influenced by her suggestions, ‘I showed her before Christmas, Fauré Pavane, Opus Fifty... when I went to see her in February it was on her playlist which I was quite pleased about’. Whilst research suggests that for adults over the age of 50 years, music listening might be a less social and more a personal experience (Lonsdale & North, 2011), sharing musical interests with loved-ones remained important to Alison.

6.2.1 Music, identity and self-expression

Music played an important role in the self-expression of many participants. Music was not only part of the leisure lives of Laura, Zoe and Greg, but also a source of income and professional development. Newly professional singer, Zoe, considered music an important part of her personal identity, ‘music is my life, simple as that... if I've not got my music it's just not me at all’. For non-musicians too, music was an important part of their identity. Alison, for example, described herself as a ‘really good appreciator’ of music, and Ben acknowledged the role of music in self-expression during his teenage years.

It [music] was my way of like, communication to the outside world, well music helped me a lot because I didn't have many other hobbies... my only outlet was listening to sports, football, rugby commentaries on the radio, and listening to music... it was just an outlet for me to vent my [laughing] theories or vent my frustration of what I could have done, what didn't do, or maybe doing more than what I did do maybe, if that makes sense (Ben, 38)

Growing up in a religious family who considered music to be an undesirable pastime had created friction between Ben and his family. He had spent his early adult years balancing the facets of his identity as a Muslim, a son, a VI person, and a music fan. He commented that he had felt frustrated, but music offered an emotional outlet and a way of ‘rebellious’ against the expectations of his parents. Music appeared to be one facet of Ben’s life which was outside the restraints felt in other areas of his life. The role of music in identity construction and self-expression during adolescence has been highlighted in past research (Bonneville-Roussy et al., 2013; Lonsdale & North, 2011; North et al., 2001). Sophie also viewed music, both listening and song-writing, as a form of self-expression. She commented on the autobiographical nature of her writing, ‘everything that I've experienced I kind of write about it’, reflecting research which highlights the opportunities offered by song-writing for people to develop, discover, or reinforce a sense of self and personal identity (Baker & MacDonald, 2013, 2017).

6.2.2 Music to connect with, or disconnect from, the environment

Many participants viewed music as a source of connection to their environment and the people around them. Natalie considered this connection to be emotional, but others observed that music provided useful information or extra details about their environment.

Music is just always a part of that, it's I think, deeply a part of my emotional connection with the world and with people and just, with life really (Natalie, 49)

I'd say sound in general as I say... but yeah, I think it [music] can just help to set moods, set tones and things, and it can help to kind of pin point where you are sometimes. You know if you walk past a pub you know you've gone past a pub because you might hear live music or some form of music. If you I don't know, a car goes past, you probably would hear the car, but if it's an electric car goes past you hear a radio you know, it's somebody going past in a car (Mike, 41)

As is apparent in Mike's comments, both sound more generally and music contributed to understandings of the environment. Natalie commented that this was particularly important when travelling abroad.

Music is another way of getting an insight or connection with the culture of wherever we are... any opportunity where there's maybe buskers on the street or something, to stop and listen, or finding out about instruments or something that might be particular to where we are... it's I think a part of just painting a fuller picture? And I suppose if you think of music as an extension of sound that kind of makes sense, maybe in the same way that somebody else might take an interest in the artwork or architecture... I guess music for me is you know, an accessible kind of way of tapping into that difference or similarity (Natalie, 49)

Music offered Natalie additional insight into the places that she visited. The parallels drawn between the use of physical aspects of the environment and Natalie's use of music to develop her understanding of the environment highlight the importance of music as an alternative to visual information for individuals who have a VI.

In contrast, Adam reported that the immersive nature of music listening through headphones fulfilled a unique opportunity to disconnect from his environment. He spoke about his difficulties recognising faces, 'if we were sort of further away I might not say hello to you in the street... people just think you're being a bit rude'. Headphones gave Adam a reason for failing to recognise people, without mention of his VI.

I suppose it's a bit of a kind of, what's the right word, not safety blanket, but having headphones in and somebody calls you and you don't answer, you've got a get-out haven't you, as in, I didn't see you, it was I didn't hear you 'cause I had my music in (Adam, 37)

Research has documented the role of portable devices in the creation of separate auditory spaces (Biserna, 2015; Heye & Lamont, 2010). Bull (2015) described the appeal of the iPod as allowing users to move through space in their own 'auditory bubble', offering the user control over aesthetic, cognitive, and social aspects of their day (p. 3). Similarly, Heye and Lamont (2010) found that use of portable listening devices during travel led to feelings of privacy, safety, and relaxation. Music listening through headphones provided greater control over Adam's social interactions, and a feeling of being inconspicuous to others. It should be noted that Adam was the only participant to listen to music when walking in public. In contrast to Adam's comments, Natalie actively avoided listening in this context due to concerns of personal safety, 'I tend not to listen to something when I'm out walking... I just need to concentrate too much on the environment'. Natalie's comments reflect literature which highlights the challenges faced by pedestrians who have a VI, including difficulties navigating around other people, traffic, and the physical environment (Butler & Bowlby, 1997; Manduchi & Kurniawan, 2011).

6.2.3 Music as an accessible hobby

Music retained an important place in the lives of several participants as an accessible hobby. Musical activities, including listening and music-making, were perceived as accessible, in a way that other activities were not.

The school was putting on a musical and I actually took part in that, just as a member of the chorus but that was, I think it was a really big part in just settling into the school and being accepted if you like, 'cause it was just something that I did in the same way as everyone else did and all of that kind of thing (Natalie, 49)

Natalie's involvement in her school's musical had been an important part of acclimatising to school life and demonstrating to others (and perhaps herself) that she was able to do the same things as everybody else. Music was also important in offering an accessible hobby to Ben, 'music helped me a lot because I didn't have many other hobbies'. Feeling unable to partake in the same activities with his peers, music listening became the one activity that Ben felt able to access. Similarly, Mike felt that music listening was something which remained accessible to him as an adult with deteriorating sight, particularly thanks to technological developments.

Even if you can't see you can still enjoy it, no one can take, well obviously unless I lose my hearing, but generally no one can take that away from me... And technology's obviously not going to restrict me to an extent (Mike, 41)

Others offered similar views. Robert believed that music was 'naturally' more attractive than other hobbies to those who have a VI because it was more accessible, and James observed that individuals with a VI were much more likely to take-up music than other visual-based creative outlets.

There's certain things that blind people aren't going to do and there are certain things that are easier for them to do, so blind people, you won't find many totally blind people who are great photographers, or painters, right, so music is something that's open to them so it might be that because it's open to them that they're a bit more likely to go down that route because other routes are denied to them (James, 55)

The range of functions fulfilled by music may explain why music was considered to be important to participants in the current study, and corroborates findings of previous research which has shown the importance of music in the lives of children and adults who have a VI (Ockelford & Matawa, 2006; Park et al., 2015).

6.3 Chapter summary

The current chapter has provided an overview of participants' musical engagement across the lifespan, focusing on their music listening experiences. Several participants reported an interest in music at an early age. Participants observed that music had been important at this time for

several reasons, including the opportunities it provided for educational experiences through music listening and collecting, and enjoyment of an accessible hobby (both music listening and music-making were considered accessible to them at this time). Participants' childhood experiences of music-making will be explored, in more detail, in Chapter 8. During adulthood, functions relating to music as an accessible hobby and as a way of connecting participants with their environment suggested that music may fulfil unique roles in the lives of individuals who have a VI, in addition to those functions commonly identified in the literature (e.g. self-regulation, accompanying other activities and contributing to identity construction). It was also noticeable that some participants drew associations between having a VI and a natural connection to music. Participants observed that the importance of sound more generally may be associated with a gravitation towards music, and that a VI could impact positively on the listening experiences of these individuals. However, several factors were found to impact on music listening, including changes to family life, time constraints, and involvement in other leisure activities. It was also suggested that technology, or a lack of technological engagement, could impact on musical engagement, a topic which is returned to in the following chapter.

7 Study 2- Using technology to engage with music

As highlighted in the Chapter 6, participants' comments suggested that the use of technology could impact, both positively and negatively, on musical engagement. This chapter further explores this topic, first outlining participants' overall engagement with technology, barriers to technology use, and sources of support, before exploring engagement with music listening technologies and the impact of technological developments on access to music.

7.1 Overview of technological engagement, challenges, and sources of help

Participants' engagement with technology varied greatly (see Table 6.1 in Chapter 6 for an overview of participants' technological engagement). Some were highly engaged and actively sought new technologies, whilst others chose to use established and familiar technologies. Those who were less technologically engaged tended to be older. Illustrating this, the four non-smartphone users in the sample were all aged 60 years or above.

Technological advances had contributed positively to the lives of several participants. Mike recognised the potential role that smart technology could play in the lives of those with a VI.

I don't know if a lot of people with visual impairment have even [begun using smart devices], I'm sure there's some technical people who have jumped on to it but there's a quite a few people at support group who haven't yet but to be honest, it seems to me the kind of life saver for kind of most things because you're going to make the house smart eventually (Mike, 41)

Similarly, Hayley reflected on the importance of technological developments for individuals with a VI, listing a range of tasks which had been made easier by smart phones.

It's revolutionised a lot of people's worlds these smartphones, but if you pop visual impairment into that mix, I cannot stress enough how much, whether it be access to music, online shopping, things that weren't easy for me have suddenly become a lot lot easier (Hayley, 53)

The increasing accessibility of technological devices has impacted greatly on the lives of VI users, assisting in tasks relating to navigation and travel, information retrieval and communication, and increasing independence both inside and outside the home (Bhowmick & Hazarika, 2017; Hakobyan et al., 2013). It was also suggested, by multiple participants, that people with VIs are often highly technologically engaged, although it was participants with a high level of technological engagement who made this suggestion.

Skype for me's been really good because I've met people, I met him through a website for blind people it was a blind conditions sort of eye conditions website, but you can do voice chat with each other, a lot of blind people tend to do things like that 'cause we're quite sort of like geeky and stuff, and get into computers and stuff so you tend to do stuff like that (Ben, 38)

This association seems significant and may reflect the range of benefits for VI users listed above. Access to technology may also have implications for VI individuals' well-being. For example, a qualitative study by Abeele, Cock and Roe (2012) found that opportunities for information seeking and communication via the internet were associated with active agency and independence for individuals with a visual or hearing impairment.

With regards to music listening, there was variability in chosen devices. Smartphones and radios were most popular (all participants used one or other of these devices regularly). 12 out of 14 participants who spoke about using a smartphone for listening used an iPhone, with built-in accessibility being cited as an important benefit. As Victoria commented, 'The Apple accessibility is brilliant'. Research has documented the popularity of smartphones for music listening but has often found a greater use of these devices amongst younger listeners (Kuoppamäki et al, 2017; Lepa, Hoklas & Weinzierl, 2015; Wang, Xiang & Fesenmaier, 2016). This was evidenced by the lack of uptake of these devices amongst older participants in the current study. In contrast, the popularity of the radio across the current sample reflects findings from existing literature which suggest that despite technological developments, traditional models of listening persist (Krause, North & Hewitt, 2014). This was also reflected in the large number who retained their CD collections (discussed in Section 7.2, in the current chapter).

Other less common devices for music listening included televisions, MP3 players, PCs or tablet PCs, and smart speakers (e.g. Amazon Echo), and no participants used a specialist assistive device for this task. Overall, participants offered positive appraisals of the accessibility of mainstream devices and recognised the progress that had been made towards increasing their accessibility. Victoria suggested that there had been a growing concern amongst developers to provide increased support to their users. She commented on the high level of support provided to VI users by her local Apple store, who were now working alongside the RNIB to host accessibility workshops for VI users. It should be noted that in contrast, Natalie suggested that identifying sources of technological support could be difficult, 'you've got to find somebody who's using the same adaptive technology with a similar level of vision'.

In addition to factors relating to accessibility, Laura reported that specialist assistive devices for music listening cost significantly more than mainstream devices.

Never had a daisy player because again I didn't want to get into a system where I'd got to buy an expensive piece of equipment from the RNIB and then have a subscription on top of that, because RNIB are dear, they are really expensive (Laura, 45)

It was more cost effective for Laura to purchase a mainstream device with built-in accessibility features than to purchase a more expensive device which would also require additional software. Given the perceived accessibility of mainstream devices amongst the sample, and the

costs associated with specialist assistive devices, it is perhaps not surprising that mainstream devices were the preferred means of accessing recorded music.

The remainder of this chapter discusses participants' use of technology for music listening. This includes exploration of participants' past and present engagement with physical music collections and older forms of technology, and the role of new listening technologies in the lives of participants. Figure 7.1 offers an overview of themes relating to the accessibility of technology for music listening.

7.2 Engagement with physical collections and older technologies

There was variation in the size of participants' music collections and their engagement with this collection. For those participants interviewed at home, many were able to demonstrate a collection of CDs which had been collected over several years, although most were seldom used. As Eleanor observed, 'Our CD racks are all there and they barely ever get an airing because all the stuff's been imported, so we just can't bring ourselves to get rid of them'. Eleanor's CD collection was no longer used, but it still appeared to hold sentimental value. In their exploration of recorded music consumption, Makkonen, Veikko, Halttunen and Frank (2011) found that participants cited similar reasons for engaging with tangible music channels, including the emotional value held by physical collections and their value as a means of self-expression. Similarly, Mike sought the materiality of physical music collections.

I always prefer to have something physical... a lot of it comes from the fact that my dad was always big on music... my dad actually from an early age used to listen to every soul, reggae, Motown song going at home, and he used to have market stalls with vinyl and sell them onto the people and he eventually kept all his vinyl (Mike, 41)

Mike recognised the ease with which newer forms of technology allowed access to music but maintained a preference for physical collections. Research suggests that whilst there is an increasing consumption of digital music, physical formats are still preferred by many (Styvén, 2010). As Belk (2016) comments, despite its prevalence, digital content is typically often perceived as less secure, less meaningful and less authentic than tangible equivalents. Engaging with a physical collection was also important to John, who used vinyl records to listen to some styles of music, 'as far as a bit of techno and house goes, I do prefer to dig out my old vinyls and have a bit of a DJ session'. The interactive nature of a listening session with vinyl records clearly contributed to John's enjoyment and reflects Magaudda's (2011) suggestion that vinyl offers contemporary listeners a contrasting relationship with music to that offered by digital music listening experiences. In addition to sentimental value, others kept physical collections as a 'back-up' to digital libraries. Eleanor commented that, 'we were a bit old-fashioned and we thought it's better to have the hard copies still in case something goes wrong'.

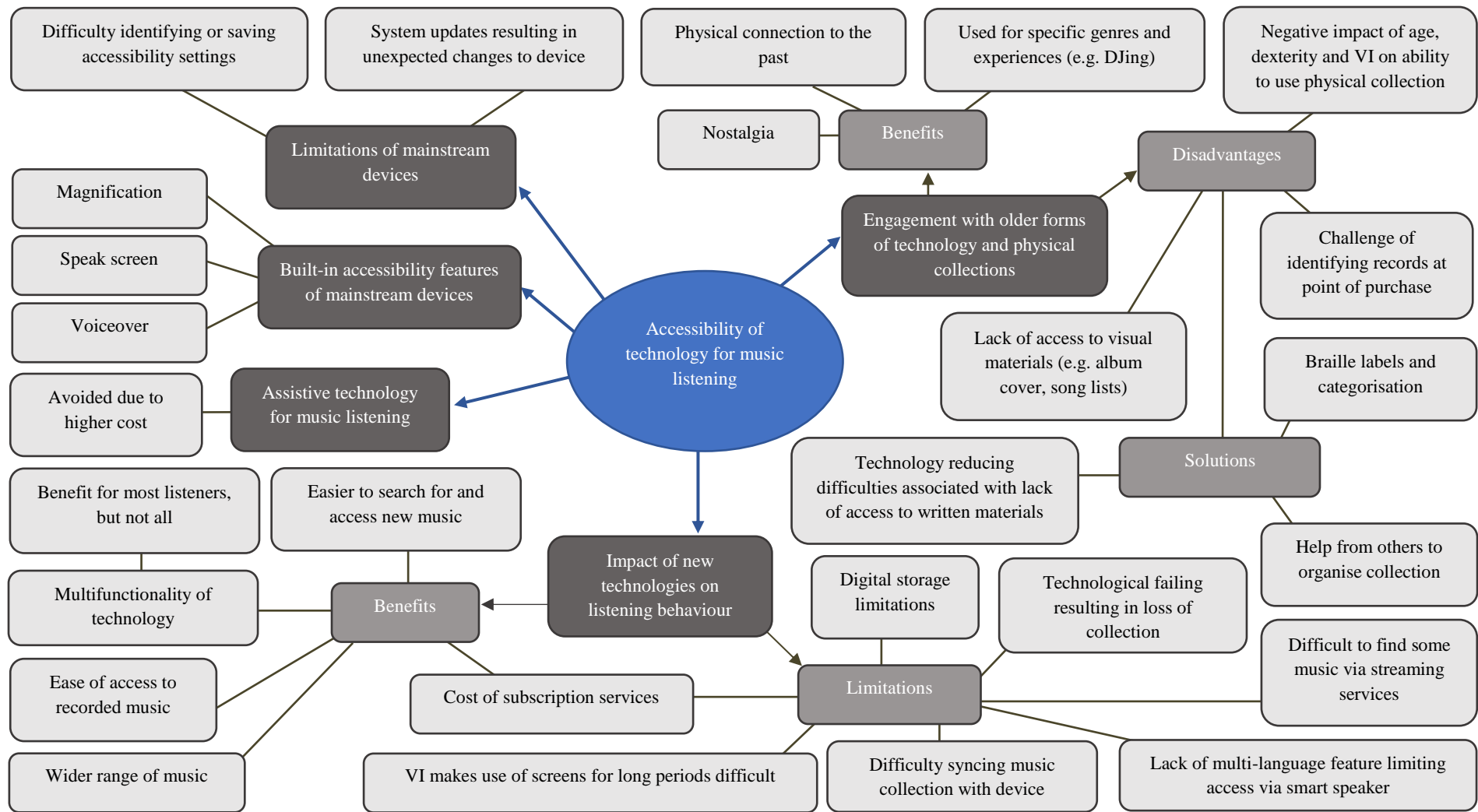


Figure 7.1: Thematic map of the accessibility of technology for music listening.

Others too expressed distrust towards some technology. Having stored her music on a hard disk drive, a device failing had resulted in Laura losing a large part of her collection, including recordings of her own performances.

For those who had experiences of physical music collections, a common observation was the inaccessibility of visual information provided alongside records. This included details of the artist and record, the cover art, and song lists. In the past, Mike had carried out the arduous task of listening through an entire album to learn the order of songs.

I used to have a lot of CDs, I would do everything on CDs and I could read the back of the CDs, and then it got the point where I couldn't read the back of CDs... whilst I might still put a CD on I'd have to basically skip the tracks to learn what the tracks were... I would you know use my hearing to work out you know, which song was which and so on (Mike, 41)

Mike indicated that he had experienced feelings of frustration when his sight deteriorated to the point of not being able to engage with these written materials, which had reduced his interest in music listening at the time.

It's [music] a hobby for people, a hobby for myself, a hobby for everybody else, and a hobby that starts to become challenging when you can't read things and it kind of become frustrating because it kind of got to that point where I stopped listening to things cos I couldn't be bothered if I'm completely honest it's so much of a hassle to have to go and faff to do it (Mike, 41)

In contrast, Sophie suggested that not having access to written information could contribute positively to music listening, creating an opportunity for a more unpredictable listening experience. Her use of the 'Shuffle' function achieved a similar result, 'I put my phone on shuffle because I don't want to listen to it in the right order [laughing] 'cause it's boring'.

Braille labels offered a possible solution to not being able to read CD covers, although the task of labelling CDs required a high level of organisation and/or sighted support. Eleanor commented that she rarely did this 'because you have to be terribly organised'.

It should be noted that in addition to VI, Colin observed that factors relating to age and dexterity also created challenges. Whilst Colin still had a small collection of vinyl, he rarely used these records, 'it requires rather fine and careful movement... I found that I was a little bit clumsy in doing that... so I'm not doing much with the vinyl disks anymore'. Both a reduction in dexterity and a low-level of vision could increase concerns regarding the care of a physical music collection, with obvious implications for an individual's continued musical engagement, particularly if alternative listening technologies are not available.

7.3 The impact of new technologies on music listening

Many participants acknowledged that new technology and online services had increased the amount of music listening carried out. As Adam commented, 'I suppose it's easier to access

than it was before'. The connectivity of technology was also recognised. Laura commented on her speaker system, which allowed music to be streamed across her whole house. For many, online music services had usurped engagement with either a physical or digital music collection. Hayley described the music on her Spotify account as her 'collection' and commented that whilst she might download music occasionally, she had otherwise 'totally gone over to that [streaming]'. Zoe observed that the cost of streaming was far less than she had previously spent on downloads, 'I used to spend like literally hundreds of pounds... This way I'm not spending as much'. However, contrary to Zoe's view of streaming as a low-cost option, the cost of streaming services was, for Ben, the reason for cancelling his subscription.

I was paying a tenner a month and I just thought sometimes I don't even use it some months, 'cause I've got my own collection of music... It didn't seem worth the money to be honest... sometimes I just like use YouTube and just listen to playlists on there (Ben, 38)

Whilst existing research shows that individuals cite lower costs as an advantage of digital music formats, it has also found that some consider streaming music services to cost too much, and that this cost may contribute to the decision of some to source music illegally (Borja & Dieringer, 2016; Makkonen et al., 2011).

Beyond reducing the time and effort involved in music listening, new technologies had, for some, reduced feelings of frustration associated with the functional limitations imposed by a VI on musical engagement. Mike acknowledged that his Amazon Echo had reduced the impact of deteriorating sight on his musical engagement, revolutionising his listening at home.

Sometimes I can't read the description, whereas with Alexa now I know exactly what I've got, and likewise if I did decide to buy something like Spotify for a little bit I could literally just say, shuffle, and you can say things like I don't know, 'Shuffle rock music', and it'll just literally play any rock music that it can find and you can just say 'next' or you can say it by artist or you can say it by song, and it's just easy (Mike, 41)

The use of smart speakers and virtual assistants by individuals with a VI has yet to be fully explored, although the RNIB (2017) highlights the range of tasks with which these devices can assist. Research is also being carried out to explore how this technology might be best utilised for elderly users, with obvious implications for older adults who experience sight loss (Munteanu & Salah, 2017; Vacher et al., 2015). Still, the use of this technology in the context of music listening for VI individuals has, up to this point, not been considered.

Engagement with new technologies had also simplified Hayley's listening experiences. Factors relating both to Hayley's VI and personal life had made the effort involved in engaging with her CD collection so great that she had stopped listening to music as much as she would like. Access to a subscription service via her smartphone had removed the feelings of frustration previously associated with music listening.

To be honest I'd dropped off my music listening a bit, partly because I had a lot of stuff going on in my life but partly because I thought, oh god I've got to go through all those CDs and sort them all out if I want to play something, but now yeah, it's kind of rebuilt my interest if you like, I've never lost it but it just made it so easy (Hayley, 53)

The popularity of streaming services (eight participants reported current use of a streaming service) suggested that for these individuals, they were an accessible way of listening to music.

In addition to increasing access to listening experiences, technology had increased the availability of information about new music. Ben appreciated that streaming services recommended music to listeners, 'Spotify's been a really great help because I've learned about new artists'. Similarly, John talked about the role of audio recognition technologies (e.g. applications such as SoundHound and Shazam) in accessing information about new music. As an internet radio listener, John observed that the lack of voiceover on these stations created difficulties for VI listeners, who may not be able to access information displayed on a radio.

I can hold the iPhone near the speaker and it'll hopefully give me the title and the artist so I can look for a track... these stations you don't necessarily have live people that give out the title for the tracks 'cause you know they tend to rely on more like RDS and display technology to display the titles of tracks which is great for people with eyes but not so great for us (John, 38)

Once again, technology limited the potential negative effects of a lack of access to written materials on the music listening experience.

7.3.1 Challenges of new technologies

It must be noted that despite the benefits associated with new technologies, engaging with this technology could also be challenging. For example, the effort required to search for music online was so great that Lily had all but stopped doing so.

I just sort of haven't got round to doing it [getting a smart phone] and I tend not to use a computer for, I mean I'll occasionally try and find stuff on the computer via iPlayer but it's just such a hassle sometimes to do that, that it's not worth the effort (Lily, 60)

Lily's self-perceived lack of technological ability meant that she had not yet found the confidence to try using any new devices.

Victoria had also experienced difficulties with her iPod, which was the source of her 'historical favourite music'. A deterioration in her sight meant that browsing her collection was now not possible. Victoria acknowledged that our discussion had reminded her to explore the accessibility options for her iPod, 'You're making me think now... I'm actually wondering if I got into settings whether I could download that magnifier that I've got on the other things'. Whilst Victoria evidenced a willingness to explore ways of making her iPod more accessible, she had not yet taken steps to making her iPad (which she regularly used for music listening)

more accessible. The nature of Victoria's VI meant that using a screen for any length of time had an adverse effect on her sight and could result in headaches. Whilst Victoria recognised that speak screen software would overcome the need to interact with the device using her residual vision, she was unwilling to use this feature whilst she had enough vision to interact with the device using her remaining sight and her memory of where Apps were located on the screen. Victoria's comments illustrate that whilst accessibility features may be built-in to devices, a preference for familiarity, or perhaps a reluctance to acknowledge the changing nature of an impairment, may delay the uptake of these features.

Mike reflected on the limitations of video hosting sites for VI users. He noted that sifting through irrelevant content and identifying specific tracks was difficult; only on pressing play could he confirm that it was the right track.

Let's say I wanted a Beatles song and quite often I'll play it and I'll be like that's a cover by some random guy in his bedroom playing Beatles which is not what I wanted... and then that kind of frustrates me and I'll do that two or three things and go, I can't be bothered I'll just put my audio book on. And so there's little things like that that'll make me just switch off (Mike, 41)

Whilst perhaps unavoidable, difficulty searching and identifying music on these sites led to feelings of despondency and a loss of interest in music listening. Little research has been carried out in relation to the use of video hosting sites for VI users, although literature highlights the additional challenges faced by this group when searching online. These experiences are often associated with cognitive overload and difficulties locating goal-relevant information (Di Blas, Paolini, Speroni., 2004; Sahib, Tombros & Stockman, 2012; Theofanos & Redish, 2003). Mike's comments suggest that these difficulties may arise when searching for music. Mike also expressed concerns regarding the Amazon Music page. During the interview, he demonstrated the difficulty of identifying elements on the page due to a lack of colour contrast, small font sizes, positioning of items on the page and interactive graphical elements.

Took me a while and few choice words to actually work out where 'Upload' was on the right hand side, but because I'm kind of used to stuff not being there, I know where people hide things and where the magic mouse-overs are and things like that, and so I move around until potentially I find stuff, and then when I get really frustrated I go, 'Emma, where the hell is it?' (laughs) and she goes, 'It's over here' and then I'll learn where it is (Mike, 41)

As an experienced computer user, Mike managed these challenges well, but as his comments above suggests, those with less knowledge of webpages could face even greater difficulties.

Lily acknowledged that the difficulties she experienced when using technology led to feelings of frustration due to her 'being slow'. Lily was not disinterested in technology but lacked confidence. As mentioned above, Lily had not yet bought a smartphone, 'partly 'cause of issues about learning to use one, 'cause of you know, touchscreen'. Greg also referred to touchscreen

devices, commenting that, 'it's all too much for me now, I find the whole lot confusing'.

Research highlights the importance of perceived ease of use in the uptake of technology (Davis 1989; Pavlou, 2003; Venkatesh & Davis, 2000). Both Lily and Greg perceived the difficulty of engaging with unfamiliar devices as a barrier to their use. Despite this, Lily acknowledged that this could increase her access to music.

The phone that I've got is just a standard phone... if I could access the internet properly then I might listen to a bit of stuff via the internet but because it just doesn't really do that (Lily, 60)

Concerns regarding touchscreens are not unfounded. Literature outlined in Chapter 2 highlights the challenges that this technology can create for VI users (McGookin et al., 2008; Williams et al., 2013). However, as highlighted by the uptake of smartphones in the current study, these devices have become increasingly accessible through built-in accessibility software.

Finally, Robert felt that age also had a part to play in the uptake of new technologies. Like Lily, he acknowledged the benefit that access to new technologies could have, particularly with regards to reducing overall cost of musical engagement.

I was just born a bit too early... I'm not very techy and so I'm no good at downloading or listening to things on Spotify, or archiving my collection... I wish I'd done that because I'd have saved an awful lot of money, instead of buying CDs... it makes so much more sense to listen to things this way because if you are only going to listen to it once well, why not just do it on Spotify rather than buy a CD (Robert, 80)

Existing literature suggests that age may be a predictor of both device use (including smart phones and computers) and the use of the internet to access music (Kuoppamäki et al., 2017; Neves et al., 2013). Reflecting this, three of the four participants who were still regularly using a physical music collection were over the age of sixty. Given the association between sight loss and aging in the UK, it is important to recognise that factors relating to both VI and age may increase challenges for elderly users with sight loss.

7.4 Chapter Summary

This chapter has considered participants' engagement with technology for music listening. Technological engagement varied between participants and age appeared to impact on participants' chosen devices. As Robert suggested, he felt that he had been born 'too early' to be engaged in new listening technologies. As such, use of smartphones tended to be a feature of younger participants' listening experiences. The built-in accessibility features of these devices were cited as a benefit, and several participants cited the use of streaming services through their smartphone as a preferred method for accessing music.

Technological developments had alleviated difficulties and frustrations experienced in relation to music listening. In addition to the popularity of the smartphone, comments regarding the use

of smart speakers were also significant, highlighting the potential impact that these devices could have on musical engagement for VI users. The lack of uptake of these devices amongst the current sample may reflect their relatively new emergence, but future exploration of the experiences associated with these devices for VI users would be valuable. However, there were also challenges associated with the use of new technology. These were both practical, such as difficulties searching for music online and identifying sources of support, and psychological, with perceived effort being a barrier to technology use. It is also notable that despite the challenges associated with the use of physical collections, they remained a preferred means of engaging with music for some. Sentimental value, nostalgia, and opportunities for an interactive musical experience overcame concerns regarding accessibility. Thus, accessibility was not the only factor influencing technological device choice for music listening.

8 Study 2- Music-making and professional music careers

This chapter explores the music-making experiences of participants. This includes a consideration of the functions fulfilled by music-making and factors impacting on musical learning, performance and practice. The experiences of both professional and amateur musicians are discussed. It should be noted that the term “professional” denotes any form of music-making for which money was earned, and so includes those whose primary income was through music-making, and those whose music-making brought in additional incomes alongside another occupation. The discussion that follows is contextualised within literature which has explored the music-making experiences of VI musicians and considers the wider psychological implications of the challenges they face.

8.1 Music-making during childhood

Music-making contributed to many formative and memorable experiences during participants’ childhoods. Instrumental learning featured heavily in the recollections of those who had attended specialist schools or colleges for VI students. Memories included first encounters with instruments and learning to read Braille music. In general, participants who had attended specialist schools reflected on high levels of encouragement for musical participation. As Jack (past attendee of specialist school) commented, ‘Oh yeah, the specialist schools encouraged you to take up an instrument from the early days’. However, two things should be noted. Firstly, as many specialist schools are, or were, boarding schools, the amount of extra-curricular activities carried out at school may have been greater than that carried out in non-boarding schools; this would explain greater levels of music-making in these contexts. Secondly, those participants who had attended a specialist school had done so several decades ago, and specialist schools and colleges have undergone dramatic changes in recent decades (Keil & Clunies-Ross, 2002; RNIB, 2014b). Participants in the research of Baker and Green (2017) considered a reduction in specialist schooling to have shaped the musical opportunities available to young VI musicians, including reductions in Braille music literacy.

Both Robert and Jim recalled musical performances at school or college. Robert, who considered himself a mediocre pianist, reported ‘what I really enjoyed doing most of all was accompanying and I was quite good at that’, whilst Jim recalled his experience of being invited to play the harmonium for hymns after his school’s evening meal.

I felt very proud about it... I was the one who went after the meal, got up, walked to the harmonium, told the teacher what hymn we were having... I really enjoyed that part, obviously it made me concentrate on it because I had to learn the music for the hymns (Jim, 84)

Jim highlighted the positive impact that these performances had on his musical development, providing him with motivation to practice and progress in his playing. As Pitts (2012)

highlights, musical opportunities provided within the school environment may contribute greatly to an individuals' perception of their musical development and possibilities for future learning. Adam too, reflected on experiences of performing, this time as a member of a band during his teen years. This activity had sparked a life-long enjoyment of musical performance.

Despite these positive experiences, some participants believed that having a VI as a child had impacted negatively on music-making. Victoria believed that her VI may have been the cause of many of the challenges experienced when learning the piano, including difficulties relating to the use of sheet music and learning left hand parts, which she put down to, 'the fact that the sight went in that eye first'. Mike had also had a greater level of vision during childhood but still experienced difficulties reading sheet music; he commented on the possible impact that this may have had on his motivation to practice, but acknowledged the futility of drawing conclusions about the influence of VI on his musical engagement at this time.

I might have been a fantastic musician if I had more motivation because I found it easier... looking back as a child, did I not practice that much because it was never easy to read music... would I ever actually have done it more if I found it naturally easy? I don't know. (Mike, 41)

The role that having a VI may have played in the childhood music-making of both Mike and Victoria can only be speculated. However, it appears that engaging with sheet music as a young musician with a VI have resulted in additional challenges. It is notable that difficulties with notation were not limited to printed notation. Difficulties learning to read Braille music was cited as a barrier to Eleanor's enjoyment of piano lessons as a child; she had not played beyond childhood but now enjoyed ensemble singing and had taken-up the flute as an adult learner.

Participants highlighted a range of additional factors which had shaped their childhood music-making. Many of these were practical, such as the availability of an instrument, quality of teaching, or time constraints due to academic commitments. These findings reflect those identified in the research of Lamont, Hargreaves, Marshall and Tarrant (2003), who found that reasons for stopping instrumental lessons included practical factors such as the availability of the right instrument and a reluctance to miss lessons for instrumental tuition. Exposure to music at home was also found to influence music-making, reflecting research which has evidenced the role of parental involvement and encouragement in children and young people's musical engagement (Creech, 2010; Sichivitsa, 2007; Simpkins, Fredricks & Eccles, 2012). As Adam commented, 'We used to do like little performances and stuff, parents were never pushy but they'd always encourage us to get involved'. It is notable that according to Adam's brother, Mike, parental influence went beyond the typical encouragement to pursue musical pastimes.

My mum claims... she got both me and my brother into music because she knew we had an eyesight problem, she thought it would be something that we could focus on... she sent us in for

lessons cos she was like, it's something that I knew, she always said that if you lost, let's say if I couldn't work, she's like you can still teach music (Mike, 41)

Mike's comments suggest that his mother's decision to encourage musical participation had been influenced by her sons' VIs. Music was considered an accessible pursuit, and a potential source of income should they find themselves unemployed. This belief reflects those expressed by focus group participants regarding the importance of music as both an accessible hobby and a source of occupational opportunity for VI individuals (see Chapter 4, Section 4.8.2).

In contrast to parental encouragement, Laura had grown-up in what she considered to be a non-musical family who had been unable to financially support her musical interests, 'I hadn't been submerged in that world of you know, being taken to concerts and having music lessons'.

Despite this, Laura financed her own music lessons, developed a theoretical understanding of music and went on to pursue a career as a professional singer. The role of internal factors relating to personality and motivation appeared to be of greater importance to her early musical development than factors relating to external encouragement. As suggested by Burland (2005), a developing musician is not an inactive recipient of external influence, and elements outside the role of others, including motivation and personality, are central to their experiences.

8.2 Current music-making and functions of solo and ensemble playing

Participants were engaged in a range of music-making activities which were often part of their daily or weekly routines. Henry commented that he played the piano for 'about an hour a day', which he considered an important mental exercise. Both Natalie and Emily attended weekly choir rehearsals, whilst several others had performed in choirs or bands in the past. In addition to instrumental playing or singing, John and Ben were involved in sound production. John currently produced music at his local church and Ben was a presenter and producer on an internet radio station. Participants were also involved in musical performances. Eleanor and James had been involved in casual performances at folk festivals, Henry had sustained a part-time performance career alongside a full-time job as a typist, whilst Adam had performed in a band outside his full-time teaching career. A small number of participants were also involved in composition and song-writing; Sophie enjoyed recreational song-writing, whilst both Zoe and Greg were involved in these activities on a professional and semi-professional basis (Greg specified that he was semi-professional, rather than a full- or part- time professional).

In addition to its accessibility as a hobby (discussed in Chapter 6, Section 6.2.3), solo and ensemble music-making offered a range of benefits. Firstly, it was viewed by some as an opportunity to test their musicianship. James reported a sense of accomplishment which accompanied his instrumental practice, 'it gives you such a thrill when you work something out and get something right'. Literature suggests that this feeling of pleasure and satisfaction may contribute to individuals' motivations for continued musical participation (Wan & Schlaug,

2010). Adam emphasised music-making as a technical challenge. He had high expectations of himself, and in the past, band performances had become pressurised environments.

I'm a bit of a perfectionist, I like to get things right, I used to play a game in the band, count how many mistakes I've made... I just enjoy doing it [performing], it's sometimes it's a bit stressful but it's always a good feeling afterwards when you've got through it all (Adam 37)

Adam's attainment of musical excellence was central to his motivations for musical participation. Whilst aspirations for musical mastery are not unusual in either amateur or professional musicians (Bonneville-Roussy, Lavigne & Vallerand, 2011; Roulston, Jutras & Kim, 2015), Adam suggested that his VI may have influenced his attitude towards instrumental playing, a topic which is returned to in Section 8.3.3 (current chapter).

Reflecting his transition from part-time performer to amateur instrumentalist, the focus of Jack's playing had changed over time. He recognised that music had once held importance as a technical challenge, but as an older, amateur musician, his focus was now on enjoyment 'as you get older it's only harder to learn the fingering and you tend to, just play the tunes... as long as it feels comfortable to me that's the main thing'. Literature highlights the range of benefits of amateur music-making in older adults, including offering a sense of purpose and opportunities for enjoyment (Creech, 2013a; Gembris, 2008). As someone with previous experience as a semi-professional musician, these benefits were central to Jack's current music-making.

Secondly, musical performance provided Laura with an 'escape' from the facets of her identity which were tied to her VI.

I can remember saying to somebody once that because they wondered if when I played Hilda I was going to play her as blind, and I said no... why would I play her as blind, I'm putting a blonde wig on you know, I'm playing her as blonde, why would I want to play her as blind, I want a night off being blind you know, I want a bit of a break from that (Laura, 45)

Portraying a character in an opera was a chance to assume the identity of a typically sighted person, removed from the functional limitations and concerns associated with her VI. In this context, Laura's VI became secondary to the task at hand. Indeed, literature addressing the experiences of opera singers highlights the importance of entering a character's reality and attempting to understand their experiences and feelings (Goldstein, 2015; Ostwald, 2005). This would include explorations and representations of a sighted character's interactions with their sensory world. Music-making also appeared to offer Adam an escape, this time from his usual shyness. Adam observed that performing onstage was the place where he felt most confident.

I suppose I've always been dead shy and I'm still a bit like that now and I've been singing and singing for ages but I don't like, I don't know, small groups you know like if there's like three or four people are like, let's just sing, I'll be like really self-conscious, but in a big room where there's hundreds of people [chuckle] I'm like fine (Adam, 37)

Research shows that performers like Adam, who typically identify as shy in their everyday lives, may adopt an onstage persona to achieve a greater sense of self-confidence, as shown in Scott's (2017) exploration of shy performativity in the performing arts. As such, live performances may have provided a welcome break from Adam's usual shyness. Whilst it is unclear whether Adam associated his shyness with his VI, the opportunity for Laura to break-away from her usual identity appeared particularly important because of her VI.

Finally, several participants reflected on the social nature of music-making, and the opportunities that performance provided to feel connected to others.

Part of the audience are rocking and dancing and then they're cheering and they want more and you think you're going to go all night and then the final bell goes, hey you've got to do your last number now, well we could have played all night (Jack, 57)

Jack's comments reflect existing research which highlights the shared nature of live music experiences between audience and performer (Pitts, 2005; Pitts & Burland, 2013). Jack also acknowledged the value of audience feedback, 'they praise you afterwards, that's the big thing... you know you've done a good job then'. Similarly, John reflected on the appreciation he received from members of the congregation at his local church in his role as sound producer.

You know to have that ability to use those skills to do the Lord's work and getting feedback from people at church, you know they were liking the results I was producing and to be actually asked to you know, do that, yeah every Sunday and when we have these United Services meetings, you know, that was a good experience as well (John, 38)

Audience appreciation gave Jack and John an opportunity to feel valued by others.

Furthermore, John considered sound production to be a religious activity, and an opportunity to give something back to his community. Sharing performances with other musicians was important to James, who enjoyed the collaborative nature of folk music performance, and Henry, who considered performance an opportunity to connect with other musicians.

It was absolutely wonderful, you know this Cuban chap started playing and I found myself accompanying him rather than playing the melody... we got alright at the end and then we kind of both gave each other a hug... Couldn't speak a word, different language isn't it (Henry, 80)

Music had provided Henry with opportunities to meet and share musical experiences with people from all over the world. As evidenced in existing research, music provided Harry with a means of communicating which had offered opportunities for social bonding with even the newest of acquaintances (Pearce, Launay & Dunbar, 2015; Waddington, 2013).

As this discussion highlights, musical participation fulfilled a range of functions in the current study, several of which reflected those identified in existing literature. However, it appeared that having a VI impacted on the functions and motivations associated with music-making.

8.3 The impact of visual impairment on music-making and music careers

As seen in Table 6.1, two participants were currently full-time professional musicians, Greg described himself as a semi-professional musician, and Adam, Henry and Jack had maintained part-time professional music careers alongside other employment in the past. Furthermore, many had been involved in amateur music-making at various points in their life. There were some similarities between the factors influencing music-making for the current sample, and those without a VI. For example, time constraints, access to instruments and music-making opportunities, changes to family life, and age all effected musical participation. This reflects many of the practical factors found to limit music-making in the general population, including age-related reductions in mobility, strength and embouchure (Gembris, 2008), family responsibilities, and finding a suitable ensemble (Pitts, Robinson & Goh, 2015). However, there appeared to be some differences in the experiences of those with and without a VI. Several challenges, associated with having a VI, were highlighted by participants who were, or had been, engaged in music-making. As seen in Figure 8.1, there were four main areas in which the impact of VI on music-making could be seen: establishing a professional career, the live performance context, notation, and psychological impacts. These factors are discussed below.

8.3.1 Establishing a professional identity

The research of Baker and Green (2017) highlights several challenges faced by musicians with a VI. This included decisions regarding establishment of oneself as a ‘VI musician’ within disability arts, or ‘a musician’ within the wider music scene. This decision was reflected by the comments of Laura, who viewed herself as a, ‘singer’ rather than a ‘blind singer’. She had experienced discriminatory attitudes from an agent who had been unable to view her as such.

He signed me off the back of the programme and I think he thought, ooh celebrity singers... then reality hit home that he really didn't have any respect for, perhaps not musically for me, but certainly for me, 'cause I'm not a blind singer I'm a singer who is blind you know (Laura, 45)

As Baker and Green (2017) highlight, the use of term ‘blind musician’ as a marketing tool may be undesirable for some, detracting from equality with sighted musicians. Laura appeared to feel similarly and only considered disability arts work appropriate in cases where her VI was not highlighted as her defining feature.

8.3.2 Challenges associated with the performance context

Both professional and amateur musicians were able to reflect on the practical challenges associated with live performances. Laura recalled the experience which had led to her decision not to take her guide dog onstage during performances.

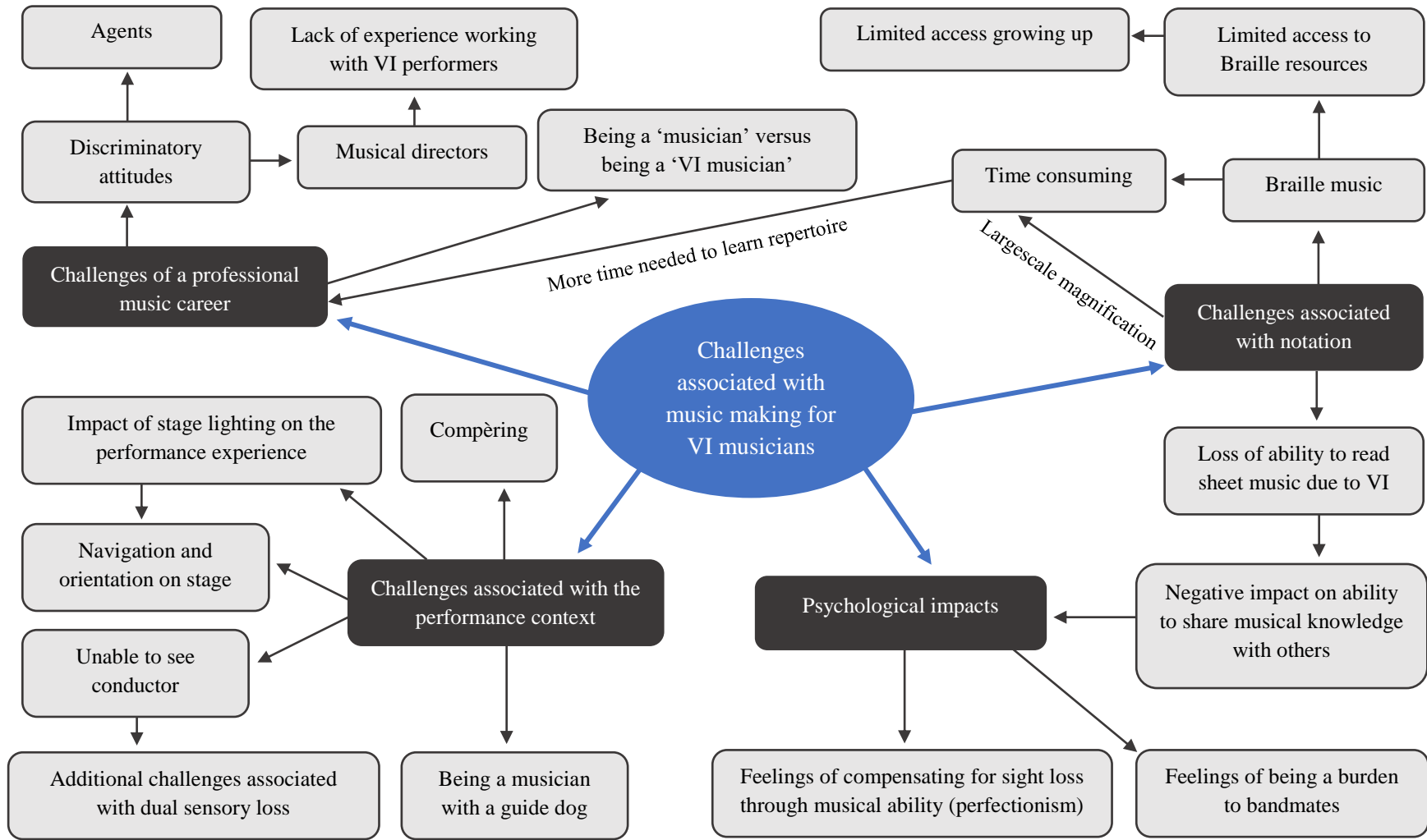


Figure 8.1: Thematic map of the challenges associated with music-making for VI musicians.

I can remember taking her when I was doing [details of performance] once, and she was fine in the rehearsal and then during the performance the timpani started and she leapt from under my chair, I've never taken her on stage again (Laura, 45)

One musician in the research of Baker and Green (2017) raised similar concerns regarding the use of a guide dog onstage, commenting on its potential negative impact on professional appearance, 'It's [guide dog] usually part of you but, nonetheless, it does not quite fit in with the performance' (p. 110). Also addressing this topic of stagecraft, Laura had experienced difficulties when moving onstage during performances of operas. However, support from chorus members, who would give audible indications of her position onstage, and use of variable floor coverings, helped to reduce the challenges relating to onstage navigation. Laura highlighted the importance of working proactively to overcome such challenges.

Rather than saying for example, okay, right so, it's a problem because at this point I don't know how far from the edge of the stage I am for example... you go to them and say, look I've been thinking about this because I know that the orchestra are quite jumpy about me falling on their expensive instruments [laughing] how about we do this, and then suddenly you'll find that they are so relieved to have had this solution presented to them (Laura, 45)

Adam's primary concern onstage was lighting. He illustrated the impact that inadequate lighting could have on the performance experience, with low levels of lighting leading to difficulties seeing the fretboard of his guitar.

We always had stage lighting so it was dead good 'cause you could see everything you're doing, occasionally you'd get the odd gig where it was a little bit dull and I might just say to my mate you might need to do a bit more lead guitar and I'll just have to stick to chords (Adam, 37)

The practical limitations imposed by inadequate lighting on Adam's playing may be seen as resulting in a less fulfilling performance experience. As discussed in Section 8.2, Adam sought a test of technical ability in his music-making experience, and inadequate lighting directly impacted on his ability to take-on a technically challenging role. This has obvious implications for Adam's enjoyment of the performance experience. In contrast, Henry commented that the task of compèring, which he considered an integral part of his stagecraft, created difficulties.

I used to do the compèring, that was always a bit of a problem for me...I couldn't visually contact anybody, it's very hard compèring to a room of people if you can't see, believe me, it's difficult, I was thick-skinned enough to do it... it used to work most of the time but there was one occasion when a drummer, he saw my problem and he used to tell me a few things that were happening so I kind of got an auditory description on it, which helped me a lot (Henry, 80)

Laura, Adam and Henry's comments confirm Baker and Green's (2017) suggestion that the challenges faced by musicians with a VI are more often practical than musical. However, Henry's comments raise concerns regarding the psychological implications of these practical

challenges, with his comments suggesting great effort on his part to find the confidence to take on the role of compère.

Finally, Greg highlighted the challenges that he faced as a musician with dual sensory loss. Social Haptics, a system in which information from the conductor is received via a music assistant using tactile gestures, had become integral to his ability to partake in ensemble playing. Literature which has explored the experiences of VI musicians has demonstrated the challenges faced in relation to following a conductor; the use of verbal or audible cues (e.g. foot taps) and the positioning of musicians close to the conductor have been used to overcome this challenge (Coates, 2012; Moss, 2009). Greg's experiences demonstrate the compounding effect of an additional impairment on the challenge of following a conductor as a VI musician; his hearing impairment was an obvious limiting factor on the use of auditory-based strategies. It should be noted that Greg had also partaken in the research of Baker and Green (2017) and as such, the reader is directed to this publication for a comprehensive insight into his experiences.

8.3.3 Challenges of engaging with notation and psychological impacts of VI

Many participants valued the skill of reading sheet music, either through stave or Braille notation. It was noticeable that despite the high number of participants who had an early onset VI, only seven had learned the Braille music system (five had learned at specialist school, one was self-taught, and another had learned at mainstream school), and just two (Zoe and Henry) currently used this skill. Participants commented that access to musical notation offered an important opportunity to develop musical understanding. As Natalie stated, introduction to the Braille music system several years after she had begun instrumental lessons brought with it the realisation that 'you can actually get something that you haven't heard before and you can figure out what it should sound like'. However, participants cited challenges relating to both the use of Braille and stave notation. With regards to Braille music, participants cited the time-consuming nature of learning music. Gaining access to Braille music resources in the first place was also cited as problematic. Natalie reported, 'if I found more ready access to music, I may have kept that up [playing the organ] or gone back to it whereas I haven't really'.

Changes to vision had also impacted on the way that some participants were able to engage with stave notation. Laura and Mike had retained enough functional vision to use stave notation during childhood but had degenerative eye conditions which had created challenges relating to notation. Laura used a specialist device to access sheet music.

They're a couple of grand for a black and white version. I've got a portable version but... I could take that with me and just scan it across stuff, but I wouldn't have enough vision to do that anymore so this is the only way I've got of learning music any more, but it works, so you know I do spend a lot of time sitting here at this (Laura, 45)

Despite the cost of the device required and the time-consuming nature of learning this way, engaging with a physical score was important to Laura, 'I'm not able to remember music from listening to it... I've got to have that physical thing of having looked at it on the paper'.

Mike, who could no longer read stave notation, pointed to the wider psychological impacts associated with the loss of this ability, and its impact on his musical interactions with his children. Mike reflected on the difficulties he experienced trying to teach his children music without the use of stave notation.

I would like to be able to show my children more stuff and I can do it to an extent but then I think part of that is more that I would love to be able to just literally read the music and teach them properly, I think a big thing about learning it early on is that you actually do read the music so you actually get that basic understanding (Mike, 41)

Mike considered the use of sheet music to be the 'proper' way of teaching music and being unable to teach this way was clearly a source of frustration. The functional limitations associated with Mike's VI had altered this aspect of his musical engagement, to the detriment of his confidence in engaging his children in musical learning.

Comments from Adam highlighted two other psychological impacts. Firstly, he believed that a deterioration in his sight had contributed to his perfectionism in everyday life, including in relation to achieving musical excellence. He was determined to demonstrate his abilities to others, and believed that if he failed to do so, people would assume he was limited by his VI.

I don't like getting things wrong, I think some of this stems as well from a visual thing where I think I suppose I try and put more effort in to make sure things are done properly 'cause I'm, thorough I suppose isn't it, I like to do things, it's like with work, everything, I like to do things thoroughly and I think I, maybe I'm just paranoid that I don't want people to think that I haven't done it properly 'cause of my eyes so I kind of overcompensate (Adam, 37)

It was not clear whether any single experience, or the more general difficulties Adam faced in relation to accepting his sight loss had contributed to these feelings, but such a belief held the potential to be damaging to his self-esteem. Secondly, Adam acknowledged that being the only band member with a VI had been a cause of distress. He listed several practical limitations which he believed had caused difficulties for his bandmates.

With the band I mean that was awkward actually because I only knew one of the lads and he was the only one who knew about my eyes and everything and I had to sort of say to the others, because I was debating whether to quit really early on actually 'cause I thought it was becoming a nightmare 'cause I don't drive, difficult getting to rehearsals, people having to pick me up run me around, and then I was thinking when we do get to gigs it's going to be a nightmare for them, I can't really help with getting equipment in and out (Adam, 37)

Adam saw his VI as making life ‘awkward’ for others, and he considered himself a burden in this context. This may be seen to reflect findings from existing research which suggests an association between sight loss and feelings of dependency (Green et al., 2002; Thurston, McLeod & Thurston, 2013). However, Adam provided no evidence that his bandmates shared this view. On the contrary, they had taken steps to ensure that he was able to perform with them, including purchasing a light-rig to address the difficulties caused by low-lighting (discussed in Section 8.3.2). It was not Adam’s VI which created these difficulties, but his perception of the impact of his VI on his ability to meet his responsibilities as a bandmate.

8.3.4 Additional factors impacting on music-making

As mentioned above, a range of factors unrelated to VI were found to impact on music-making. Time constraints due to family life had impacted on Adam’s music-making. As someone who had previously had a part-time professional performance career, Adam was keen to take-up performing again. He commented that, ‘I do miss that actually, but it's just I can't kind of get the right balance in life’. Music-making opportunities were, unsurprisingly, also an influencing factor. Groups and organisations such as the RNIB’s Music Advisory Board and the Visually Impaired Musicians’ Lives project provided some with access to information, and music-making opportunities. For example, Ben had previously been a member of a percussion group organised by a charitable organisation, although the group now ceased to exist; Ben considered a lack of recreational groups as a limitation of charitable organisations. Ben’s reliance on charitable organisations to provide opportunities for music-making suggest that access to appropriate ensembles may be a challenge for those with a VI. Parallels can be drawn here with the experiences of VI musicians in the work of Baker and Green (2017), for whom access to the disability arts scene provided opportunities for music-making which they felt were otherwise unavailable to them. In contrast, over saturation in one performance environment had impacted on Eleanor and James’ decision to stop performing at folk festivals, ‘I think we were also getting a bit towards the end of that phase because they were getting a bit same-y those sessions’. Eleanor also commented that ‘we would like to do more but we’re too lazy’. A combination of internal (‘laziness’ or lack of motivation) and external (performance opportunities) factors had impacted on the couple’s musical participation.

Natalie suggested that current skill level was, itself, a deterrent to instrumental playing.

My proficiency in, not so much in reading Braille music, but *blugh* the palaver of actually, you know, memorising it [laughing] I feel like my brain has perhaps gone a little bit beyond that now (Natalie, 49)

These comments reflect findings from previous research, which has shown that a perceived lack, or loss, of musical skills negatively impacts on musical motivation and participation in adulthood (Blanton, 2016; Pitts et al., 2015).

Additional practical limitations included a lack of access to an instrument (Jim had not had a piano for several years and, as such, had not played during this time), difficulties finding the right standard of music ensemble (Eleanor noted that this was a barrier to engagement in choral singing), and age or illness. With regards to the latter, Henry observed that returning to the piano after a period of serious illness meant that he had only been able to sit and play for a few minutes before tiring, whilst Robert recognised that a lack of practice over time, combined with his age and reduced dexterity, had resulted in an almost complete lack of instrumental playing.

I've really let it go I'm afraid, to the point where for a while there was just one piece I could still play and I got my hands on a piano the other day and I found difficulty that I hadn't experienced before getting round the keys... so I almost can't play anything now (Robert, 75)

Finally, age also impacted on music-making. Robert recognised that a lack of practice over time, combined with his age and reduced dexterity, had resulted in an almost complete lack of instrumental playing.

I've really let it go I'm afraid, to the point where for a while there was just one piece I could still play and I got my hands on a piano the other day and I found difficulty that I hadn't experienced before getting round the keys... so I almost can't play anything now (Robert, 75)

This factor may be of significance to explorations of musical engagement for those with a VI because VI is often associated with age-related conditions. For older adults with a VI, factors relating to age may create additional difficulties relating to music-making.

8.4 Chapter summary

This chapter has explored participants' music-making. Musical participation provided some with a full-time or part-time career, and for others, a much-loved pastime fostered in childhood. Several benefits of music-making were cited, including its use as a technical challenge, an 'escape' from VI, and a social experience. The functions associated with music-making in the current sample reflected those identified in existing literature in relation to non-VI musicians, although the importance of music as an 'escape' from VI and the impact of VI on attitudes towards musical perfectionism suggest that a VI may impact on motivations for musical participation. Furthermore, some acknowledged difficulties associated with music-making. Challenges relating to establishing a professional identity, stagecraft and navigation, and musical notation were identified. The psychological implications of these challenges appeared significant, particularly for those who experienced late-onset sight loss. Research has documented the negative emotional impacts and continued adaption associated with late-onset sight loss, and it appeared that these impacts may also be felt in relation to musical engagement (Nyman et al., 2010a; Senra et al., 2015).

Given the small number of participants currently engaged in music-making, this chapter can offer only an overview of some of the experiences of musicians with a VI. Once again, the reader is directed to the work of Baker and Green (2017) for a comprehensive exploration of this topic which draws on the experiences of a far greater number of musicians.

9 Study 2- Attending live music events

A growing body of literature has evidenced the variety of motivations and positive outcomes associated with live event attendance (Ballantyne et al., 2014; Burland & Pitts, 2014; Dikmen & Bozdağlar, 2013) and this chapter considers this topic from the perspective of VI attendees. This chapter also explores how a VI might impact on the experience of live music events, considering factors which may act as barriers to both enjoyment and attendance at live events.

9.1 Factors influencing attendance at live music events

Participants had attended a range of different musical events, including popular and classical music concerts, festivals, operas, musicals, jazz nights, and events at which recorded music is played, such as club nights. Participants acknowledged the influence of both practical factors, and factors relating to the music itself, on their attendance at live events (see Figure 9.1 for overview of themes).

9.1.1 Logistics and practical considerations

Many participants felt that they needed to attend events with a companion and acknowledged that the process of finding someone with whom to attend was a primary concern. Natalie commented that this reflected the social nature of live events, 'I think even if I wasn't blind I'm just a people person so I'd much rather go to something with someone'. Hayley agreed but added that concerns of personal safety also impacted on this decision.

You have to go [to concerts] with people that are you know, I wouldn't do, I mean I would do a lot of things by myself but that I wouldn't do by myself [laughing] too crowded, too busy, but I think most people wouldn't anyway you know, you'd go with friends (Hayley, 53)

Participants also associated attending with others with a range of additional practical benefits relating to travel and navigation, which will be returned to in Section 9.6.4. For a small number, attendance was organised via membership of a group or organisation.

I'm a member of an organisation... the arrangement was developed between the music department of [location removed] Council... and the society, and the society used to pay for the concerts and... whatever we bought in tickets for a concert, they'd match it, we did alright there, and since they moved, we nearly lost it but we've had it back (Jim, 84)

Above, the financial support provided by the council was central to making live music available to members. Jim observed that attending events through an organisation was useful as it provided access to transport and sighted guides. However, he noted a decrease in volunteer guides, with obvious implications for the organisation's ability to provide opportunities to attend events.

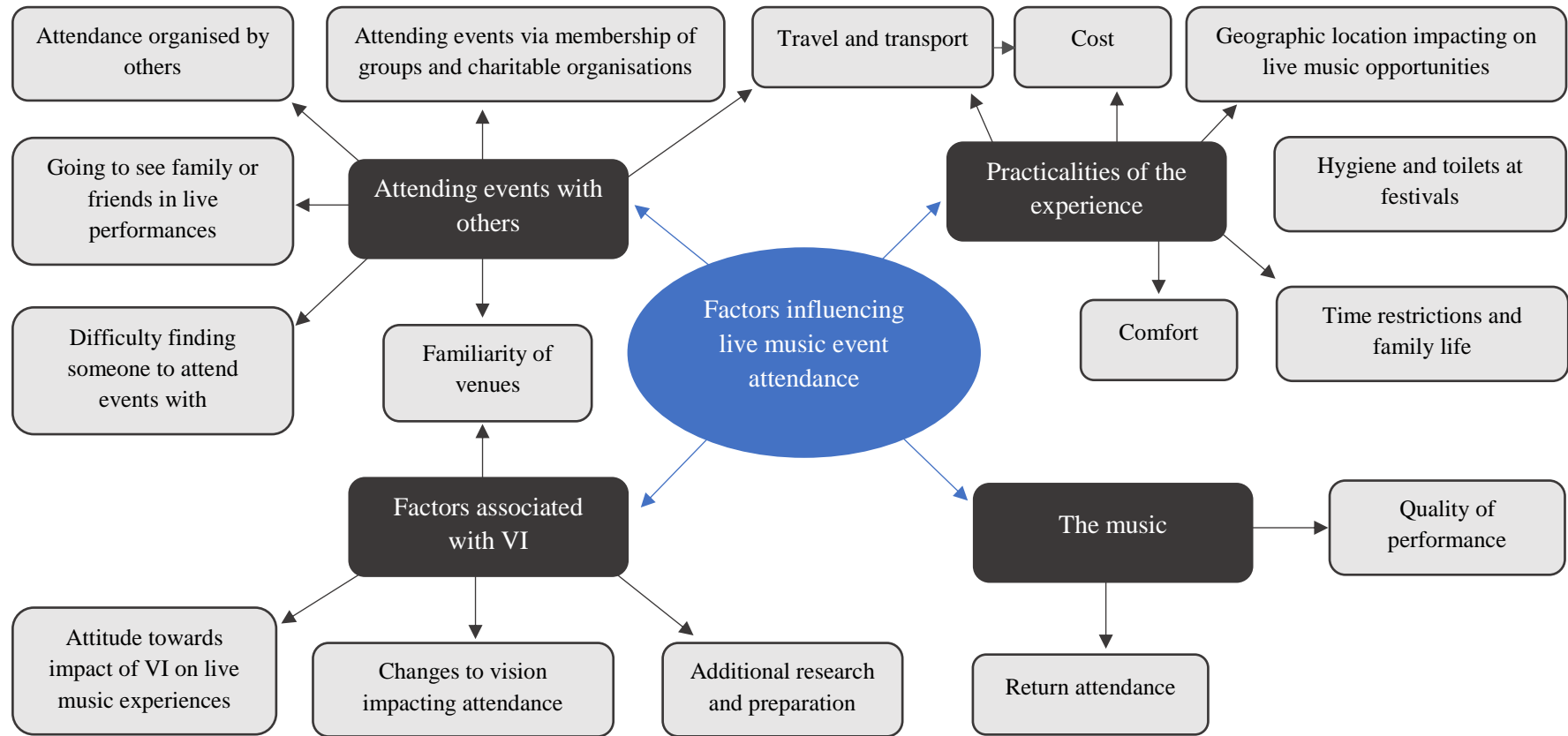


Figure 9.1: Thematic map of factors influencing live music event attendance.

In contrast to charitable organisations, John had employed the mobile application Meetup, which provides a shared platform for scheduling and organising attendance at events. He commented that the app had helped him to improve his social life and believed that it could be of benefit to other VI users, but he also noted that as a mainstream app, the accessibility of events was not a priority. John highlighted challenges associated with hard-to-reach venues, and reflected on one occasion when, without the support of another group member, the cost of a taxi had been the deciding factor in his decision not to attend an event.

I had to pull out of that one... I won't tell you what I said because it wasn't very nice but yeah I wasn't happy about it because I would have liked to have gone but... it was just not really practical, 'cause electronic sales have been a bit bad and I had my horse to look after (John, 38)

Others also had concerns regarding transport. In Natalie's local town, the limited public transport during evenings and weekends made some venues unreachable. Lily reported similar difficulties accessing public transport in the evening, 'you can't get a train back that's late enough. I really wanted to see... a blues guitarist... but the last train's something stupid like half past ten'. Even travelling to venues within London could be difficult on public transport.

It's not brilliantly accessible [long pause] to get there by public transport is a bit difficult, if I'm going by myself, I'll typically go with my wife and we'll go independently, I'll come from work, she'll come from home, and I'll get a taxi to the Barbican and where it puts you down it's actually, it's quite a walk from where the concert hall is (Robert, 75)

Whilst the additional cost of a taxi was not a barrier to Robert's attendance, difficulty accessing or using public transport, and a subsequent reliance on taxis, could significantly increase the cost of attending an event.

Mike considered the process of getting to a venue to be one of the greatest barriers to attending live events, for anyone with a disability. He believed that other challenges could be overcome, but this was only possible if he was able to get to the venue in the first place.

I know that chances are I'd be able to find the facilities and ultimately I would still enjoy it because it's the sound that I would go for but I think it's more the barriers of getting there but then I think that's a disabled person thing in general (Mike, 41)

Research suggests that challenges associated with travel to events exist for many disabled people, relating both to a lack of accessible public transport and the perceived risk to personal safety on night-time services (Arts Council of Northern Ireland, 2007; Charlton et al., 2010; Culture Republic, 2017). This may result in a reliance on family members to supply transport, with implications on maintaining independence, or the use of taxis, which increases the likelihood that cost will become a barrier to attendance (Arts Council of Northern Ireland, 2007).

In addition to travel, other practicalities were also of importance. These included anticipated levels of comfort (seating and temperature), hygiene (at music festivals), location of events (Zoe and Alison commented on the limited availability of events in their rural home towns), and the cost of tickets. Victoria reflected on the cost implications of attending events as an attendee with a VI. Growing up, she had missed out on using her residual vision to enjoy some of the visual aspects of performances due to the cost of tickets for seats near to the stage.

I love the theatre, I love music, I went through all maybe the first thirty years of my life never having seen a performance 'cause I couldn't afford to sit nearer the front so I went to the theatre enough, I went to gigs enough but I didn't ever see what was going on, because of the cost involved in trying to get a seat where you've actually got a chance of [seeing] (Victoria, 55)

Victoria observed that, in general, classical music concerts incur a significant cost to attendees. Indeed, literature highlights the significant financial commitment often needed to attend events (Arts Council England, 2014; Brown & Knox, 2017). As Victoria comments below, cost may be a greater concern for individuals who have a VI, due to high levels of unemployment in this group (Slade et al., 2017).

Accessibility in the broader picture... I think we're on about twenty per cent of working age people who are registered blind or partially sighted are in employment... so as soon as you equate that to the cost... Of a ticket, or that kind of concert, then that's massive, so the free carer's ticket takes some of that away but it's still going to be out of a lot of people's reach (Victoria, 55)

Victoria acknowledged that free companion tickets may alleviate these concerns, and Natalie commented that these tickets could also overcome challenges associated with travel and transport. However, cost could remain a barrier to attendance given the reported 27% rise in ticket prices (accounting for inflation) since the 1990s (Graham, 2018).

Finally, as with listening at home, time constraints and family life impacted on event attendance, particularly for those with young children. It should be noted that whilst practical factors such as cost and distance may not be limited to the experiences of those who have a VI, their impact may be felt more acutely by this group. For example, geographic location may be a greater barrier for those who do not drive and rely on public transport or taxis; this may increase the cost of attending an event, which may be a greater concern to individuals who have a VI and are more likely to experience unemployment than those who have typical sight.

9.1.2 Impact of VI on attendance at live events

Participants acknowledged that in addition to the practical considerations discussed above, their VI had also impacted on attendance at events. Natalie observed that difficulties accessing information meant that she sometimes became aware of events too late to attend.

I think in a way I put it out of my mind [laughing] in terms of when something's just not possible you just kind of go, okay like that's just not going to work... I can't think of an instance where it's happened really [missed out on an event] and I think if it did it would probably be largely because I've only just heard about something on the day, or it's going to have been that accessing the information in the first place (Natalie, 49)

James also reflected on occasions when he and his wife, Eleanor, had felt there was 'no chance' of attending an event; the barriers associated with attending were viewed as unsurmountable. For both James and Natalie, adequate preparation prior to attendance was highly important, with last minute attendance at events being problematic. Similarly, Mike considered the collection of all available information prior to attendance to be central to his ability to enjoy an event. He commented that he, 'would have to make sure I was comfortable with the toilets, it would be the first thing I'd be thinking of'. He also believed that venues must make information about events accessible to attendees, particularly with regards to access provisions.

I'll have done my research, and it's all about just relaxing, making sure you've covered all the steps but then likewise if venues can make things easier... do they have disabled areas, do they have disabled toilets, do they have whatever it is, but if they make that easy and accessible (Mike, 41)

Next, most participants expressed their preference for visiting familiar venues. This made navigation less stressful and meant that they were already aware of the support that would be offered. Eleanor commented that she and husband James, 'almost exclusively' attended one venue 'because it's easy for us to get to and they're really helpful there'. Adam also commented that as a repeat visitor, he was assured that he could safely move around a venue.

I do like local live music as well, I think that would be good to do more but... I tend to stick to bars that I'm familiar with for obvious reasons... if we ever arrange things I always think I'd prefer to go where I know [laughing] and that I know that I'm fine getting around, it's like in the village we've got [name of venue] down the road, I know like the lighting sometimes in there is a little bit dodgy but I know it well enough (Adam, 37)

It was apparent that participants' attitudes towards their VI also had a part to play in their engagement with live music. Hayley had been VI since birth, but commented that as an adult, she had developed an outgoing approach to life and sought opportunities for new experiences.

I would now [attend a live music event] I think that I'm in a different frame of mind in my life and I think that applies to life generally. You do change... I would look for an opportunity now to go and see someone and I'd see if I could get one or two friends to go (Hayley, 53)

The change that Hayley refers to is related to attitude rather than sight. Others were keen to highlight that a VI did not dictate any aspect of their life, including attendance at live events.

If you didn't go to see any bands you just, you wouldn't go anywhere, so if you didn't go because you missed the visual part... you wouldn't go to anything, so yeah you miss out on a bit 'cause you can't see, but what's the alternative? Not going to anything (Emily, 42)

Mike offered a similar account to Emily. Rather than dwelling on aspects of a performance that had become inaccessible, he focussed on finding a way to enjoy events in a different way.

I always just think you've got to try and enjoy the elements of it even if you can't enjoy the full experience... I guess a lot of experiences can be changed and tweaked because you just basically do things in your own way... take from it what you want to take from it... that would be my advice to most people with sight loss... don't go and think, 'I'm not going to enjoy it, I can't see it', because you might actually go and really enjoy it (Mike, 41)

Mike had recently made the conscious decision to take greater advantage of new opportunities and experiences. He commented that he had been trying 'to force myself to do stuff, stuff that I wouldn't normally do'; this included taking part in the current study and becoming more involved with sight loss charities. Rather than negatively impacting on Mike's engagement in activities, a deterioration in his sight had prompted a positive change to the way he approached challenging situations such as live events. This had required a significant change in his attitude towards his changing vision. In contrast, Victoria commented that deteriorating vision had led her to avoid certain types of event.

I used to go to punk gigs at Camden a long time ago, but I haven't done that with this level of sight, I've done it maybe with half sight, I know from memory that it was hard enough with half sight, enough for me to be quite cautious now, if that makes sense, so it's past experience when I could see more than I could see now that's made me a bit cautious about where I would go (Victoria, 55)

Victoria's condition resulted in concerns regarding how she would cope at smaller venues. Her comments suggest that changes to vision may reduce the number, or type, of events attended. However, like Mike, it was apparent that Victoria was looking to expand her experiences and find confidence to overcome the perceived barriers imposed by her VI. She commented that, 'I might end up booking something smaller this year just to give it a go, see how it went'. Whilst perceived accessibility of a venue may be an important factor in participants' decisions to attend an event, these comments suggest that attendance may also be impacted by an individual's current attitude towards their VI, and associated levels of confidence.

9.2 Factors influencing enjoyment at a live music event

Atmosphere was considered one of the most important factors contributing to enjoyment at live music events; size of venue, acoustics, crowds, and the listener's position within the venue all influenced an event's atmosphere. Factors relating to the musical performance, such as familiarity, variety, and quality were also of importance. Existing research documents the role

of both musical (e.g. repertoire, aspects of the live performance) and non-musical (e.g. proximity to other audience members and seating arrangements) factors in the enjoyment of live events (Packer & Ballantyne, 2010; Pitts & Burland, 2013; Radbourne, Glow & Johanson, 2013). Given the similarities of these factors and those identified in existing literature, and the focus of the thesis on the experiences of individuals with a VI, the discussion that follows focuses on two factors relating directly to the experience of attendees who have a VI: the volume sound at live events, and the concept of events as audio-visual experiences.

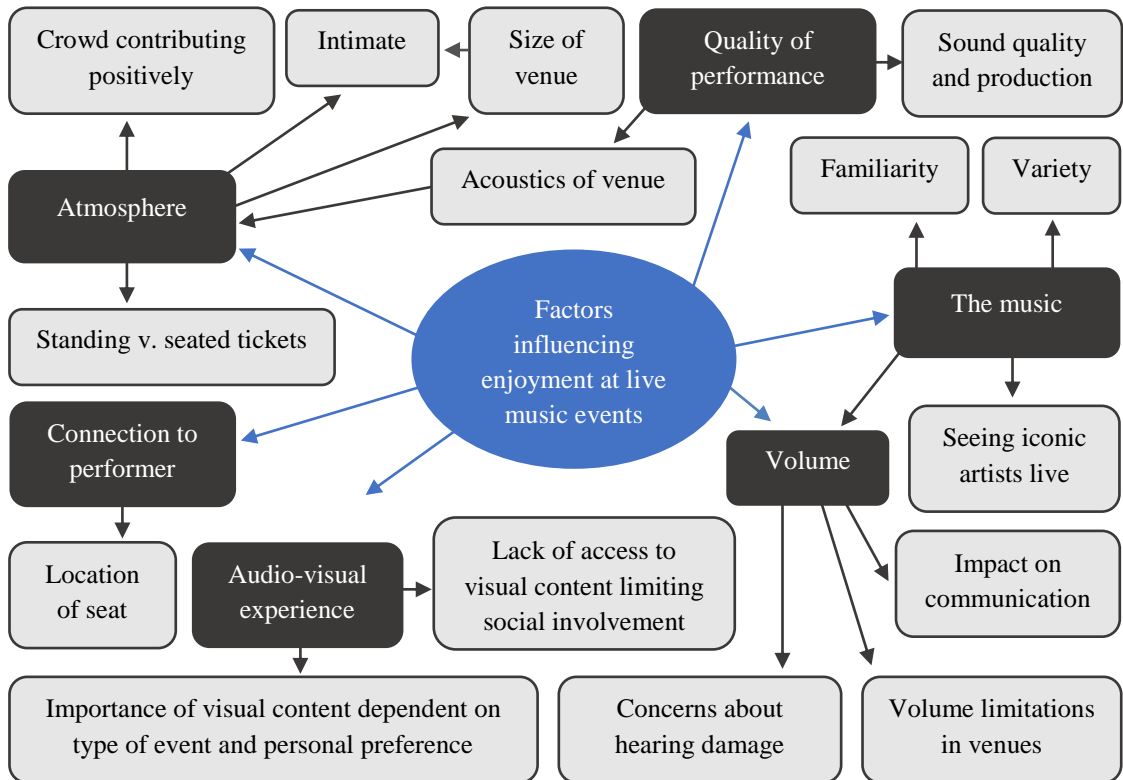


Figure 9.2: Thematic map of factors impacting on enjoyment at live music events.

9.2.1 Volume of music

Jack and Alison observed that loud volumes of noise could impact on an attendee's hearing and reflected on temporary damage following events and the potential for permanent damage.

You find that a lot of the gigs are very loud and you can come out nearly deaf (Jack, 57)

I do worry that I'm going to damage my hearing... I used to go to discos when I was at school... I'd hate it, and I'd think oh it's too loud, and then I'd come out and I'd get this ringing in my ears and that would worry me for days (Alison, 52)

Being able to hear was incredibly important to Alison; music listening was one of her favourite pastimes and therefore noise safety was of great importance, 'My eyes are no good so I don't want to damage my hearing, which is such of an essential sense, one I really need to look after, it's kind of vital in my life'. Alison's concerns were not unfounded. Greg, who had dual-sensory loss, reflected on the lasting impact that listening to loud music, at both live events and in clubs and discos, had on his hearing, 'I came back with tinnitus, a ringing in my ears, started to go deaf because unfortunately it was well over 90 decibels'. In contrast, John and Jim reflected on the communication difficulties that loud music could create.

You go into like some places that have like live rock and that and you have to *shout and try to hear the person next to you* [shouting] (John, 38)

[Details of family] they have birthdays and things like that and they go to one particular working men's club and on a Friday night... they put the music on *boom boom boom* [impression of a drum beat] and I cannot hear a word they... but then their mouths are nearly in my ear-hole and I just cannot stand it, you know, because you're not comfortable when you can't participate in any conversation, they're all lip-reading (Jim, 84)

As Jim observes, a lack of access to visual information, such as lip-reading or facial gesture, made communication difficult in noisy environments. A high volume of noise was also viewed as contributing to feelings of disorientation. Adam observed that as someone with a VI, hearing was his primary means of accessing information about his environment, and therefore loud music at events could be problematic.

If it is a normal environment you're quite perceptive to what's around from your hearing and in that environment it's too loud to kind of get a sense of certain stuff... if it's a venue where there's alcohol, people think oh that guys had too much to drink or whatever [laughing] but it's difficult, I suppose there's hidden apprehensions and there can be anxiety alongside things of not knowing where things are (Adam, 37)

Whilst Adam was happy to let others believe that intoxication was the cause of his disorientation, such assumptions could result in negative attitudes from others which may have implications for an individuals' personal safety at events. In addition to concerns regarding hearing damage, Alison felt that being immersed in loud music at events felt overwhelming.

I can't cope with discos... I find the fact that I can't see and I find all that very, very, very loud music kind of thumping inside me, I find that disorientating, I find it very distressing and it's just a scenario I just do my absolute utmost to not put myself into (Alison, 52)

Hayley offered a similar account, referring to the concept of 'sensory overload', which results from an individual's experience of a powerful or atypical sensory stimulation in combination with insufficient coping strategies (Scheydt et al. 2017).

I saw Orchestral Manoeuvres in the Dark... it's so loud, it was fabulous but it was enough for me at the end, it was almost a bit like sensory overload for me (Hayley, 53)

Hayley's comments highlight the importance of adhering to legal sound limits within all music venues and suggest that the sensory experiences associated with the live music environment may be a barrier to both attendance and enjoyment at live events for individuals who have a VI.

9.2.2 Live music events as audio-visual experiences

Most participants felt that live music events were, above all, an auditory experience; the visual spectacle was often viewed as contributing little to the experience. However, to some extent, this depended on the type of event being attended. Emily considered access to visual content unimportant in the context of rock concerts because, 'it's usually like some bloke in normal clothes... I can imagine it in my head'. She also believed that it was possible to follow the storyline of musicals without access to visual content.

I do miss out on the visuals there [musicals], but then they do have normal talking where you can figure out what's going on and again, it's in English, so I can follow a musical (Emily, 42)

In contrast, Natalie suggested that access to visual content (through AD) was important in musicals, although it was considered unimportant to experiences at classical concerts.

I've still heard the song, I've still heard this piece that the orchestra was playing and that wasn't affected by whatever else that additional thing was but when it comes to something like a musical theatrical thing... I think missing those things really is more important to me... I went with my daughter to a performance of Matilda and loved it... but if I hadn't been I think quite familiar with the story then there are things that just wouldn't have made sense... you might be attending with someone they can't really turn around in the middle of the audience and kind of be talking and yelling over the top of things to show you what's going on (Natalie, 49)

As discussed in Section 6.1, it was suggested that a VI could impact on music listening experiences at home. Mike and Victoria believed that listening experiences for those with and without a VI might also be different in the context of live music, owing to the lack of visual content available to them.

For yourself... you might only listen to say 50 percent of it because you're looking at other people, you're looking at the body language of the people playing the instruments... you're just

generally looking around and enjoying the spectacle not necessarily the sound... I would then focus in on solely the music, but then it's tricky for me in some ways because then I would usually focus on the music more because I did a music degree (Mike, 41)

It's very easy to zone out when you're visually impaired it's very easy to cut the world out completely so I think there could be some link with music and the fact that you could literally be lost in the music, quite easily, so and I don't know if that happens for other people or not... I suppose you've got less visual clutter to keep you in the here and now (Victoria, 55)

Mike and Victoria felt that visual input could be a distraction during live music listening experiences, taking-away from the musical experience. It appeared that Victoria's deteriorating sight had resulted in increasingly absorbing listening experiences. However, as Mike observes, his musical training might also have influenced his approach to listening in the context of live music. Whilst these comments suggest that visual input could be disadvantageous to the live listening experience, the visual spectacle was a memorable aspect of events for Jack.

The lighting's good at night as well, you've got, as it gets darker it gets better and they start showing off with lasers and things like that, that's very good (Jack, 57)

Jack's comments highlight the important role that visual aspects of a performance may play in the enjoyment of those who retain some residual vision. This also has implications for the enjoyment of those who lose the ability to engage with these visual aspects. This was reflected in the theme 'missing out'. Victoria observed that at large arenas, 'you can pick up the atmosphere, you can enjoy the music, but you'd have absolutely no concept of what was going on visually'. Similarly, there were occasions where Natalie felt that she was 'missing out' on the experiences of other attendees.

There might be, a reaction in the audience, you know like laughter or a *deep breath* suspense or something and you think, what on earth?!... I guess it's just one of those things that's quite pervasive, it happens quite a lot, so you tend to kind of even *argh* ignore it? (Natalie, 49)

Natalie's inability to recognise what fellow audience members were responding to impacted on her ability to feel involved in this shared experience. Lily offered a similar view account of attending events with family members; her inability to see either the performer or her family members, with whom she attended events, resulted in feelings of 'missing out'.

Well sort of a minor thing but occasionally you get visual imagery as well from the backdrop, so you kind of miss out on that, but it's more just not being able to see the band and your family yeah, that's kind of quite a big issue for me (Lily, 60)

Lily commented that alongside travelling, it was live events where she appeared most acutely aware of the negative impacts of her sight loss. This was an obvious source of frustration.

One of the times when I really miss not being able to see is at things like live gigs, I really miss that... most occasions I just you know, you kind of adapt... I think the two main times when I

really resent not being able to see what's happening on stage, one of them is visiting new places, new countries and not being able to see what's around, but the other is about gigs (Lily, 60)

Whilst others appeared unconcerned about visual details, such as the clothes or onstage movement of performers, it was these aspects of a performance which left Lily feeling unable to get 'an overall feeling of the band, or how they relate to each other, all that sort of thing'. For those with late onset sight loss, a loss of access to visual input may be a significant barrier to enjoyment, whilst in general, those with early-onset VI considered this less important.

9.3 Functions of live music

Participants considered live music events to be social activities, an opportunity to hear preferred music performed live, and to spend time with loved ones (see Figure 9.3 for overview of functions).

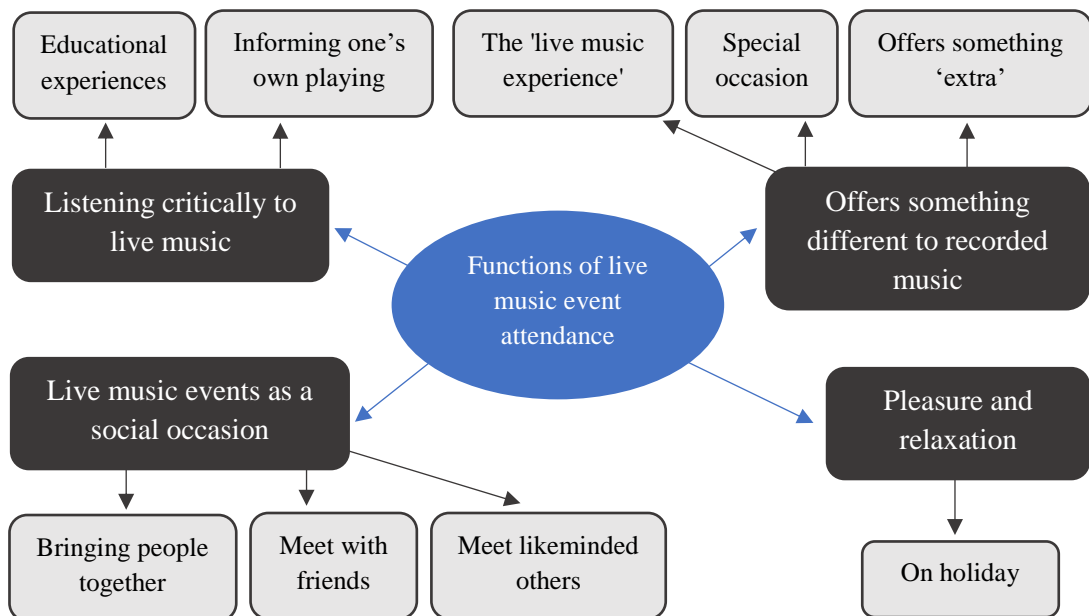


Figure 9.3: Thematic map of functions of live music event attendance.

There were some similarities with the functions associated with recorded listening and attending live events (see Section 6.2). Firstly, both experiences provided opportunities for critical thinking and evaluation.

I'm a terrible person to go to like gigs with 'cause I'll say he did that wrong, she's flat, that's not how the original is... from appreciation as well, like I really like what they've done there that's really cool, and I never thought about doing that, so I find a lot of inspiration in music as well (Adam, 37)

Adam used the performances of others to inform his own playing. Live events also offered additional educational opportunities. Robert and Alison sought educational events run in conjunction with performances, such as workshops and educational talks, whilst others

commented on the social functions of live events. John acknowledged his preference for the social aspects of live jazz nights over listening at home.

A lot of the places that do jazz you can still have, if you want to, you can still have a reasonable volume conversation, so it's both a live music night and a social night as well, you know what I mean, so you're getting a bit of two for the price of one really (John, 38)

John's comments reflect the findings of Pitts and Burland (2013), who describe live jazz events as highly social occasions at which listeners enjoy meeting and conversing with other enthusiasts. Jim also acknowledged that the opportunity to share thoughts on a performance was an important part of the live music experience, 'I listen to other people's comments, get into conversation with them and things like that'.

In addition to the above functions, participants commented on distinctions between live and recorded music listening experiences. Emily appreciated the opportunities for interactions between performer and audience at live events. In contrast, Robert commented on the immersive nature of hearing musical works performed live, 'There's something about hearing the whole of a whole set of pieces like that is a sort of engulfing experience'. Listening in a live music context was an absorbing experience for Robert, and he committed his time and concentration to this experience. Comments from Pitts (2005) resonate here, with her reference to the 'happy exhaustion at the end of a concentrated period of listening' for classical concert attendees' (p. 15). This environment offered Robert his most rewarding listening experiences.

9.4 Attending live events as a 'disabled' attendee

In the following sections, participant's experiences of live music event attendance are discussed. These sections include a consideration of experiences both before attendance, such as accessing information and tickets, and during attendance, such as interactions with staff and use of disabled facilities.

9.4.1 Accessing information and tickets online or by phone

Participants commented on their use of various sources of information about upcoming events: conversations with friends, mailing lists, radio, and brochures from venues. As Natalie pointed out, many sources of information are largely inaccessible to VI individuals, including newsletters received by email and posters, 'I find that they use a lot of images and graphics and it's really not all that helpful'. Few participants browsed online for information, although some suggested that they might do so if they knew of an event that they wanted to attend.

When asked about the accessibility of events, access to information, both in relation to upcoming events and accessibility for VI attendees, was raised as a significant barrier. Sophie observed that identifying reliable sources of information could be difficult. The phone app she had downloaded to purchase tickets had given her incorrect information about the availability

of an upcoming event. When asked if Sophie attended events, she replied, 'Not really, no, because I'm never really sure where to... get the information'. Despite Sophie's interest in attending live events, sourcing relevant information was a barrier to attendance.

As mentioned above, John had had mixed experiences with the mobile app Meetup (see Section 9.1.1, current chapter). However, John considered the app a useful source of information about upcoming events, particularly as access to information via printed sources was limited and, as someone who lived in a town called March, online searching could yield irrelevant results.

Accessing stuff in local newspapers and magazines is often out of the question, so yeah this app has been a really big help, especially, well especially if you live in a place called March, you can't even really search for stuff online... because as well as bringing up the few bits that are going on in the town called March, the internet will churn up a whole train load of stuff that's going on in the month of March but that's all over the place and nowhere near you (John, 38)

Research has demonstrated that individuals with a VI may face additional challenges when searching online, including managing information sources and the additional time needed to explore web pages when using a screen reader (Sahib et al., 2014). Sahib et al. (2014) also suggest that VI searchers may be unaware of search engine facilities which might improve search outcomes. The difficulties experienced by John may indicate a shortcoming in technological support provided to VI users with regards to web browsing.

Accessing information about upcoming events was a lengthy process for Jim, who required access to a Braille programme of events for his local town hall.

I'll ring the music department at the library, request them to arrange for the programme when they've got the new one, have it transcribed to me. The society who do transcriptions from print to other medias, which is either Braille or CD, something like that, or large print, then they will send it to me, I then choose it and bang off we go (Jim, 84)

Robert also accessed information via a programme of events, enlisting the help of his wife, who was typically sighted, to read through the programme. Although neither participant appeared fazed by their experiences with inaccessible information, the additional time needed to access information may have implications for the availability of events to VI attendees; several observed that tickets selling out was a potential barrier to attendance. Furthermore, Jim's comments highlight the important role that charitable organisations play in making information about upcoming events accessible.

In general, participants noted a preference for seeking information and purchasing tickets by phone. Zoe, for example, lacked confidence when organising attendance online.

I'm pretty good at ringing things up myself... finding the phone numbers and researching and making calls whilst I'm booking things... I had to phone that one [venue] up myself and, 'cause I'm not as confident at ordering tickets and stuff online as I am talking to people (Zoe, 28)

Similarly, James observed that speaking with someone instilled confidence during the booking process, providing an opportunity to establish what provisions were in place for VI attendees. James also felt this was a more ‘personal’ experience than booking online.

We tend to book by phone only because it gives you the chance of getting a slightly more personal touch... you get the feeling from someone's voice what they say to you about whether they're lying when they say you know, oh yes of course we'll have someone to meet you there... so I prefer to speak to someone to book a ticket really (James, 55)

Mike was in the habit of phoning up venues to gather access information, but he believed that greater effort should be put into designing websites which are accessible to VI users.

Do they have disabled areas, do they have disabled toilets... if they make that easy and accessible, and in many ways have like an accessibility section on the website... you're not fishing round for an 0345 number where you know you're going to get a call centre... If they can have centralised information then that would make life easier for people (Mike, 41)

Whilst Mike was not a regular attendee of music events, participants who attended more regularly agreed that accessibility of online information could be improved. Ben commented that access to even simple information could be limited if other people had booked tickets for events and suggested that information could be shared in alternative formats.

I think sometimes they could have alternative formats like Braille... I always find that they should have like some sort of PDF or something that you could look at on your phone whilst you're on the way... I've never found anything like that or just maybe that I've just not looked... but like when my friends book things... I say well where's the website link for the PDF... and she says I haven't got that... I just think well I suppose I don't need it because if I know what I'm going to see then it doesn't even matter, but sometimes I like to know when it starts, when it finishes, who's the acts, what acts, and I don't even know that 'til I get there (Ben, 38)

Creating Braille versions of printed materials would incur an additional cost to venues which could make it an unappealing alternative to print or digital information, however, sharing an overview of important information with those whose contact details were held by a venue would circumvent the need for attendees to trawl through past emails to find this information.

In addition to the limited information available online, participants reported that purchasing tickets online could be challenging. Victoria noted that accessing free companion tickets was far easier by phone than online.

If you want a free carer's ticket, my experience has always been that you can't book it online, so you have to phone up during office hours. If it's an agency that's selling you the ticket they then have to get back to the venue, it's just, it can be done but it's phone calls that are more effective, you couldn't just get the iPad out and book tickets (Victoria, 55)

Accessibility schemes are increasingly common, making evidencing eligibility for companion tickets and communication of access requirements easier. However, Victoria's comments suggest that such schemes are not available, or not well advertised, at all venues and still require individuals to phone venues rather than book online. Participants also commented on difficulties relating to inaccessible websites. Ben had experienced problems using a drop-down menu on one site, which had resulted in him booking tickets for the wrong event. Using a screen reader, he had failed to notice the subtle spelling difference which would have alerted him to his mistake.

My friend wanted to see KT Tunstall but I accidentally booked Katie Melua, you think how the hell do you do that, but it's quite easily done... on the internet you have these little drop down boxes when you're choosing different options and I pressed K and it went down to K and I thought yeah that's it, so it said Katie *rarara* that's the one, I didn't bother to check if it was Katie or KT 'cause of course hers is spelt with an "ie", the other one's just like an initial "KT"... so I got the tickets, I didn't bother to check them, got to the gig itself... so, the guy goes, you do realise the tickets that you've got are for concert Melua right (Ben, 38)

Ben acknowledged that failure to double-check his booking was a mistake on his part, but it is apparent that for a sighted person, this issue is unlikely to have arisen. Ben highlights the ease with which mistakes can be made when using screen reading software to interact with graphical page elements. Lily also reflected on the use of screen reading software, this time referring to the process of identifying suitable seats during an online booking.

It's impossible to see that [layout] on the website... I'm assuming that if you choose seats from the website you've got to be able to see the layout of where things are, and I can't do that, and the screen-reading software doesn't do that so I'd rather ring and talk to someone (Lily, 60)

Lily observed that online payments could also create difficulties, commenting that it was difficult to identify whether a payment had been successful. For this reason, phone bookings were preferable, 'I would sooner get that peace of mind that the payment's definitely gone through'. Only one participant, Adam, suggested that booking tickets online was easier, most likely reflecting his high level of technological confidence (see Chapter 6, Table 6.1).

9.4.2 Visual impairment as a disability

In order to access appropriate support and tickets, participants were required to divulge information about their VI during the booking process. Hayley was sure to stipulate that she did not want to be seated in a specific disabled area, whilst Zoe, who had additional mobility needs, had to ensure that she was offered an accessible seat, 'I don't like going up and down a load of steps so I have to ask for seats that aren't you know, going to be too difficult for me to get to'. Despite Zoe making her requirements known, they were not always taken into consideration.

I was kind of struggling to get up and down where the seats were... that particular venue didn't take my access requirements into account but, my sister, she actually ended up putting a complaint in and getting it all sorted out so, it was absolutely fine yeah, she was pretty instrumental (Zoe, 28)

As Zoe notes, without her sister's help she may not have achieved a positive outcome. Attitude is Everything (2018) highlight the importance of deaf and disabled attendees being informed of their rights and demanding the support to which they are legally entitled. Similarly, literature surrounding disability rights has increasingly highlighted the importance of self-advocacy in confronting the difficulties experienced by disabled individuals (Clifford, 2012). However, in the above instance, the presence of an advocate, confident enough to highlight the failings of the venue, was central to meeting Zoe's needs.

Others also recalled occasions during which they experienced difficulties expressing their needs to staff. During a recent phone booking, an assistant had categorised Victoria's VI under the disability label 'ambulance' (indicating mobility difficulties) because the system had no category for VI attendees. Victoria was unsure what to expect when she arrived at the venue.

I dread to think what I'm going find, a cushion or something when I get there [both laughing] and I've had all the conversations about, can you make sure this is a proper seat, I don't need a space, I don't need to be wheeled in I can walk in, I use a cane but, and I'll have a problem with the crowds, I'll need your disabled access but for a different reason (Victoria, 55)

Victoria's concerns were not unfounded. She recalled an event where, having informed a venue of her VI, she had been placed in a disabled area, some distance from the stage. Furthermore, she was given a fold-up chair which did not meet her needs. As Victoria observed, 'you'd rather be reasonably stable if you don't see very well'. Reflecting Victoria's experience, Lily felt that venues made inaccurate assumptions about VI attendees, often assuming mobility problems.

I think a lot depends on the place really, but sometimes you get a kind of stereotype like, well at the Bob Dylan concert... I think I must have said I was blind at some stage to get their concessionary price but it's like, oh it's really high, loads and loads of steps, are you going to be able to cope with that, that sort of you know, blind people don't do steps (Lily, 60)

The variation in the needs of Zoe, Victoria and Lily serves to illustrate the need for venues to gather all available information regarding the access requirements of attendees who have a VI in order to provide them with suitable seating. Victoria's comments also highlight the inadequate nature of disability labels offered by booking systems and the potential negative impact that this may have on access provisions available to attendees who have a VI.

In addition to divulging information to staff, Victoria commented on the visibility of her VI to other attendees; the use of a mobility aid made her VI known to others. Despite this, she had experienced some difficulties when using a shorter symbol cane (a small white held in front of the body to let others know that you are partially sighted) at live music venues.

If I use the symbol cane which I might use at work more so, my little fold up one... if I use that people don't tend to know what it is and don't move out your way, but if you use a long cane and walk fast [laughing] then people tend to (Victoria, 55)

Victoria believed there was a lack of public knowledge surrounding what the symbol cane was; only when using a longer guide cane was she given the space she needed. Literature suggests that public awareness of canes as a symbol of VI has improved (Pavey, Dodgson, Douglas & Clements, 2009), although Victoria's comments suggest that difficulties may still arise when using a smaller symbol cane.

9.4.3 Appropriateness of disabled facilities

Participants had mixed feelings towards the use of disabled facilities. With regards to designated disabled areas, Hayley worried that these areas felt segregated from the rest of the audience and sitting in them attracted unwanted attention to her VI.

I'm not ashamed of my blindness... it's not a big deal to me, but neither do I want to draw attention to it so it's, you want to go along with everybody else and fit in don't you (Hayley, 53)

In contrast, others found these areas preferable. Jack noted that they ensured attendees were located away from crowds, had more spacious seating, and easier access to exits.

Where we were it was alright because we were away from the crowd, you could see all the crowds because we were in a disabled part so that was alright but a lot of the time if you go to these gigs you're standing amongst the people, it's like you're all dancing together (Jack, 57)

As someone who was not a regular attendee at live music events, Mike's experience of disabled areas was based on his attendance at football matches. However, there are obvious similarities between the environment of sporting stadiums and large music venues, including the volume of both people and noise, and the size of the spaces that must be navigated. Indeed, sporting stadiums are often used to host live music events. In addition to practical benefits, Mike suggested that there were psychological benefits of disabled areas, allowing attendees to feel secure in the knowledge that those around them would be understanding.

Like I said, Man United was a great example because they've got that disabled suite that takes all that away, you're not in the crowds, you go to, okay maybe when you're walking down the street on the way there but, the entrance and everything to that soul section is completely segregated so you don't have the kind of judgement if you will, and the other people (Mike, 41)

It was not clear whether Mike had experienced 'judgement' from others, or whether this was an assumption regarding the treatment of individuals with a disability. Regardless, disabled areas offered a sense of personal safety and friendliness which appealed to Mike. He also spoke about the benefits of disabled toilets.

Only in recent years have I realised that hang on a minute, I [would] actually be classed as disabled, I can use a disabled toilet... if I can manage to go to a regular one I would do especially if there's like a wheelchair person waiting, completely understand, but most places that isn't the case... So, it's easier to hop in there, if the lighting's poor I can use the camera on my phone to look where the toilet is. If you're in a regular toilet you got problems (Mike, 41)

Mike's comments highlight the importance of being able to access disabled toilets as a VI attendee. However, he also highlights a potential barrier to the use of disabled facilities: perceived ineligibility. The recent upsurge in support for the use of disabled toilets by those with an invisible disability emphasises the importance of all individuals with a disability being able to make use of these facilities (see Crohn's & Colitis UK's 'Not Every Disability is Visible' campaign). Clearly, there is also a need to reassure those individuals who feel less eligible to use these facilities than individuals with other types of disability, that they are entitled to their use.

It should be noted that the challenges experienced by Mike in relation to public toilets also appeared to be compounded by issues associated with representations of masculinity.

It's not a laddy thing to go to the toilets in pairs and so whilst some of my close friends were great, it's still a problem and as a male it's also a problem because your mate chucks you in and goes 'Alright mate there's a urinal over there' and you go, they're every frigging different shape and size you can possibly imagine and in a pressured situations of not being able to see, then you're like, I just don't need this hassle, just shove me in a cubicle... it turns into such a palaver of having to over think it, which you shouldn't have to do (Mike, 41)

Given the focus on the concept of independence in stereotypical societal and cultural constructions of masculinity (Smith, Braunack-Mayer, Wittert, & Warin, 2007), it is perhaps not surprising that Mike felt embarrassed when seeking help from others in this context. Other participants also commented that disabled facilities were easier to use independently, but as Mike's comments suggest, perceived ineligibility may be a barrier to their use.

9.4.4 Accessible seating and free companion tickets

In contrast to those using designated disabled areas, some participants sought accessible seating. For Eleanor, who attended events with her guide dog, this was an important consideration; moving along a row of seats was difficult with a guide dog. Those with functional vision aimed to identify seating which would enable them to use their residual vision to enhance their experience. Hayley trusted her friend, who was able to use her residual vision, to make an informed decision about which seats would be most suitable for them.

My friend... she's got a little bit of sight so she asks them what their layout is, and she says, if possible I'd like some seats that are a little bit back from the front so that I'm not just looking at

everyone's legs on the stage... but no because we don't have a problem with you know, we have access, we don't need it specifically to be in the disabled area (Hayley, 53)

As mentioned previously, Victoria retained enough vision to be able to enjoy some of the visual spectacle of live events. She recalled the benefit of sitting near to a large screen at a concert.

When there's the capacity they do actually have visually impaired seats, so I saw, literally saw, Bryan Adams for about thirty quid with my friend... we were literally opposite the screen at the front of the venue... I could see enough on the screen... to actually have a really good idea what was going on visually (Victoria, 55)

Victoria commented that free companion tickets had increased access to more suitable seating, reducing overall cost and improving her experience of attending events, 'You'd got so much more of it... you were able to do the carer's ticket so you could afford to sit somewhere near the front'. In addition to the benefits associated with the organisation and cost of transport (Section 9.1.1, this chapter), these comments highlight the multiple benefits of being able to access a free companion ticket as a VI attendee. Similarly, the *National Companion Card Scheme* in Australia had impacted on Natalie's attendance at events which might otherwise be difficult to attend due to limitations on her independent mobility.

I kind of go, oh you know what, I think I will go and I'll be able to invite someone to come with me, particularly if it's not something that I think my husband would enjoy or he's going to be away... just gives another level of oh, I really can ask someone else to come along and it's not necessarily going to be a cost to them (Natalie, 49)

Companion tickets meant that Eleanor and James also had the option to purchase tickets for more accessible, more expensive seats. As a guide dog owner, Eleanor had begun to purchase seats in a box, which ensured that her dog was able to fit in to the space available.

We went to see the ukulele orchestra of Great Britain which is absolutely fantastic and we didn't really know about this box thing so we just went in an ordinary seat and we could just about get Yaris in there, it was a bit of a squeeze, and one of the staff actually came and said, have you thought about getting tickets in the box because it's a lot better for the dog in there (Eleanor, 53)

It is notable here that staff recommended seats in a box, which incurred an additional cost, rather than other accessible seats or seats in a disabled area. It was not clear whether Eleanor had considered this option, or indeed, whether she considered herself eligible for seating in a disabled area, but this could have offered an alternative to costly box tickets. As avid live music fans, the availability of a free ticket was not a deciding factor in Eleanor and James's attendance, but it did positively contribute to their comfort, and that of Eleanor's guide dog.

Whilst access to free companion tickets and accessible seating was viewed positively, some remarked on the perceived limited availability of tickets for accessible seating. Robert noted that this had sometimes led to him missing out on events.

At the Barbican you can get an access discount and I've been rather late... they have a quota of access seats, and last year I was too late in booking to get many of these (Robert, 75)

The limited availability of accessible seating may be a greater concern for individuals such as Robert, who need additional time to access information about upcoming events (see Section 9.4.1, above). Furthermore, Victoria suggested that schemes which allow individuals to access free companion tickets are not sufficiently promoted.

If you're registered severely sight impaired you can have a free carer to take you to the theatre, or the gig venue, as long as you fight for it, so nobody will advertise (Victoria, 55)

This, she believed, left VI individuals in a position of actively seeking out and justifying eligibility for these tickets. Venues could play a greater role in ensuring that those who are entitled, are able to take advantage of such schemes. Natalie noted that 'I've been eligible for that [National Companion Card Scheme] probably since its inception, I only got around to actually signing up for it last year', suggesting either a lack of uptake of these schemes or a lack of promotion amongst those who might benefit most.

Finally, as mentioned in Section 9.4.1, participants commented on the potential problem of tickets selling out. Whilst not a barrier unique to those with a VI, this barrier might be greater for this group. As Laura observed, accessibility software may slow-down user interactions with web pages, which could have negative consequences when attempting to purchase tickets online, 'It can be a bit difficult you know when you're using the software, to be at the head of the queue for things'. Addressing this concern, Emily observed the benefit of having evidence of one's impairment prior to booking. Despite this, concerns regarding the possibility of tickets selling out whilst waiting on a busy accessibility phonenumber were apparent.

I've got my HYNTE card for Wales... you've already proven you're disabled ... sometimes they don't have a disabled option online so you have to call... if it's a massively selling out concert then that can you know, *urgh* I'm going to miss out on the tickets, because they say ring our accessibility line that's often engaged... meanwhile all the tickets are draining away and you don't know whether to buy the tickets full price online and miss out or not on accessibility... what I do in a fast selling concert actually if I know it's coming up I ring accessibility before they've gone on sale, and I go, look like what's the situation, what can I do? (Emily, 42)

Attitude is Everything (2018) suggest several ways that the booking process might be made easier for those who have access requirements: a single and free proof of access requirement card, availability of companion tickets online, call-back options, and bookable access as soon as tickets go live. These services could make the booking experiences easier for those who have a VI, which may be particularly important when bookings are time-critical.

9.4.5 Use of audio description and touch tours

Participants' experiences with Audio Description (AD) and Touch Tours (TT) at music events were generally considered extremely positive, although use of these services was not widespread. AD and TT (which offer information and interaction with costumes and sets prior to a performance) are typically available at musicals, operas and ballets, and some participants had not attended such events. For most, these services provided useful, if not vital, information which contributed to their understanding of what was happening on stage.

I've been to quite a few [musicals]... I've always been to the audio-described performance, it's very very very rare I'll go to one that isn't. I have done a couple and... they're not just not the same... I need the audio description to find out what's happening on stage (Zoe, 28)

I got to like see what costumes people were wearing and I really got a feel for what was going to be happening (Zoe, 28)

Victoria highlighted that, due to potential language barriers, AD may be of great help to attendees of operas who have a VI.

I wouldn't have had any idea at all but of course 'cause it's being sung in Italian anyway [laughing] you're not getting the words, you know you get the enjoyment, the aria, the melody everything, but you wouldn't have had any any of the context of anything without the touch tour and the audio description (Victoria, 55)

Used in conjunction, TT and AD contributed to participants' enjoyment of stage productions. However, it was apparent that the appropriateness of AD services may vary depending on the type of event and individuals' preferences. For example, whilst Zoe depended on AD to follow the storylines of musicals, Hayley commented that in her opinion, AD was not necessary in musical performances.

The music tells a story, it's more important for me to listen to what's happening on stage... if it's a play, you might have quiet moments where visual things are taking place where you need the audio description... whereas in a musical the music and the lyrics tell the story don't they, whether that be a musical or just an artist performing... there's an element of, if there's too much audio description cutting in, you wouldn't want it because it's taking away from the musical atmosphere, and in fact, mostly it's so loud that you know, it doesn't work so well (Hayley, 53)

The additional information provided by AD was not always viewed as contributing positively to the enjoyment of a musical performance, drawing parallels with the relevance of visual content to live music events discussed in Section 9.2.2.

Despite the positive impacts of AD and TT, the availability of these services remains quite limited. Opera North advertised AD for its 2018 tour of *Tosca*, although only one AD performance was available at each venue. There is no mention of AD on the website of the Royal Opera House (although they provide an 'Audio Introduction', which provides a synopsis

of the work and description of the set, see Vocal Eyes, 2016) and the Welsh National Opera provides AD for selected performances each season. A small number of participants commented on the infrequency of AD performances. As Emily commented, ‘generally they have audio described performance on a Thursday afternoon once in a run’. If a VI person hopes to make use of AD services, they have little choice over when he/she might attend a performance. However, Victoria believed there had been improvements to the services provided for operas at one of her local theatres.

I would guess that the Grand wanted to make opera more accessible that year and you know, good on them for giving it a go because I think a lot of people got a lot of pleasure out of it and went to things that they would have just thought, no this is inaccessible I'm not going to do this... I think it'll be the opera lovers that keep going back to the opera but the fact that they did it and they worked with Action for Blind People to do it is good (Victoria, 55)

As Victoria observes, the availability of AD and TT may encourage VI individuals to attend new types of events. This could contribute greatly to the current aims of many cultural institutions and organisations: to diversify audiences in the arts and address the low attendance of lower socio-economic and minority groups (Common Theatre, 2018; The Audience Agency, 2017). Despite this, disabled attendees still face barriers to attendance (Shape, 2013) and, as Naylor, Lewis, Branzanti, Devlin and Dix (2016) report, services aimed at improving accessibility, such as synopses, transcripts, captioning, and AD, are still not frequently used, particularly in touring and small-scale theatre.

Participants also suggested that information about AD services was lacking. Natalie noted that her knowledge of AD performances came from personal ‘connections’ and noted that, ‘if you don't know that it exists you would have no way really of knowing that that's going to happen’. Even Laura, an opera singer, was unsure about the availability of AD in opera houses.

I'm not sure whether there's any sort of audio description available in opera houses, I'm sure it's coming because audio description is now available in cinemas, so you would, it's definitely available in theatres, you know in plays and stage performances, so I don't see why it's not now coming into opera houses as well, I'm sure it is (Laura, 55)

Victoria recalled one occasion where she had missed out on a TT because the service had not been advertised. She also noted that on this occasion, her use of AD had resulted from a chance encounter with a staff member, rather than advertisements for this service, ‘I only got the audio description because I was using a cane and somebody assumed and came over to talk’. Thus, whilst AD and TT services are offered by some venues, current promotion of these services appears inadequate. Ensuring that these services are apparent at the point of ticket purchase would help to ensure that VI attendees do not miss out on the benefits identified above.

9.5 Staff

The mix of accounts relating to staff assistance highlighted the variability in this aspect of event accessibility. Some commented on positive experiences during which staff had been friendly and attentive, but others recalled occasions where they had received little assistance, or experienced difficulties communicating their needs to staff. Lily observed that when visiting an unfamiliar venue, it could be difficult to identify if and where help was available, 'it might be difficult just to find the initial assistance just 'cause of getting in and being able to locate where to go to get that help... at a smaller venue like the jazz thing as I say they know me so they'll give me assistance'. Similarly, Lily commented on the availability of staff support at specific types of events and venues.

If it was going somewhere that was seated with like booked seating... then that will be easier because staff would assist... but if it's somewhere that's much less organised, like a pub or a concert in a park, then it's a lot more difficult and I suppose if it was a concert in a park or something like the Cambridge Folk Festival then you could probably get assistance from people that were there, but in a venue like a pub I don't know what the answers would be (Lily, 60)

Lily associated larger, seated, venues with greater levels of assistance, whilst less formal venues such as pubs were believed to offer less support. This contrasted with the beliefs of Eleanor and James.

They should be better organised on their help, they're all offering it, they all say they provide it, but in these big arenas... a lot of our blind friends go to them and just put up with whatever, and sometimes they get good service, sometimes they get less good service (Eleanor, 53)

There's just nobody with any time to help you at those [large] venues, there really isn't, the smaller ones are better like that (James, 55)

Eleanor and James's current engagement with live music was characterised by repeat attendance at one particular venue; the level of assistance they received was an important factor in their decision to return to this venue, 'Oh they're brilliant... they look after you from beginning to end, which is really good, and I think that's something about smaller venues that really matters'. As *Attitude is Everything* (2016) highlight, well-trained staff can have a profound impact upon the customer service provided to deaf and disabled attendees. James' comments suggest that staff support may impact on the types of venues that VI attendees choose to attend (the impact of size of venue on accessibility is returned to in Section 9.6.1 in the current chapter). However, it should be noted that *Attitude is Everything* (2014, 2016) have generally found smaller venues to be less accessible in terms of the availability of access information, companion tickets, step-free access and parking; these may be important factors contributing to the accessibility of events held at smaller venues for VI attendees.

Robert also spoke about a venue that he regularly attended. However, a lack of communication

between staff impacted negatively on his experience.

They've asked me to let them know when I'm coming... I usually ring them up beforehand and say I'm going to arrive at such-and-such a time... this usually gives rise to a hiccup... although they've told me to ring up and let them know, they always say oh we don't know anything about this we're not used to meeting people... but we usually get it together, I turn up at the reception and they phone for somebody and they come and take me to my seat (Robert, 75)

In addition to highlighting a lack of communication, Robert's comments suggest a lack of protocol for assisting individuals who might need support traversing spaces within a venue.

Communication of individuals' needs to staff was also found to be a potential challenge, reflecting similar difficulties experienced during the booking process. Eleanor recalled one concert at which a staff member had made an incorrect assumption regarding the needs of herself and her husband, James.

The steward insisted on putting us in the lift and we said we don't need to go in the lift... we can go on the escalator... He insisted on putting us in the lift and the lift got stuck and by the time... they'd actually released the lift our train had gone so we had to get a taxi back (Eleanor, 52)

The inability for staff members to listen to the needs articulated by VI attendees could lead to an extremely frustrating experience. Literature highlights that a sense of autonomy and independence is already at risk for those who have adventitious sight loss; acknowledging and acting on the requests of VI attendees is essential in ensuring their sense of independence is maintained (Du Feu & Fergusson, 2003; Pinquart & Pfeiffer, 2014; Schinazi, 2007).

Finally, Lily commented that communication might also be difficult from a practical viewpoint.

When it's really loud, then it's sometimes really difficult to hear what's being said, and visual impairment kind of means that you don't get the kind of non-verbal sort of pointing instructions or you know, and I think people kind of almost like semi-lip read, so that's real, really kind of problematic (Lily, 60)

As Lily highlights, expressing one's needs to a member of staff, or hearing instructions may be particularly challenging for VI attendees in a noisy environment. In this context, reliance on a sighted companion may become particularly important, however, increasing staff awareness of the communication difficulties that VI attendees may face, and ensuring that information regarding the layout of venues is available before attendees enter a venue, may be beneficial.

9.6 Navigation and orientation at live music events

Live music venues vary greatly in size, capacity and layout, and participants reflected on the experiences of navigating at music venues and factors impacting on this experience (see Figure 9.4 for a thematic representation of these themes). Lily observed that, 'It's just the practicalities of being somewhere that's busy and really crowded and then the practicalities of not being able

to find a toilet'. Victoria commented that her concerns regarding navigation had increased with her deteriorating vision, 'I'd check the layout of the gig as well and the venue, more than I would have done in the past'. Participants identified challenges associated with the size of venues, lighting, and their management of crowds and the physical environment.

9.6.1. Size of venue

Several participants commented that the size of a venue impacted on its accessibility. James considered it impossible to attend large-scale or unfamiliar venues without assistance from a companion. James commented that large venues could be problematic due to the increased distances being navigated, and the challenge of finding assistance (as discussed in Section 9.5).

Some huge band or something... there's not a chance that I'd entertain going on my own or even just with Eleanor because neither of us can see, so trying to get to all the places we need to get to and that, there's just nobody with any time to help you at those venues (James, 55)

Jack observed that finding the correct entrance at large venues could be difficult, a task which could be made more difficult by large numbers of attendees. In contrast, Victoria preferred large venues. In her experience, they had better seating provision, and better lighting. Victoria commented that 'even if I really wanted to go to it', she would avoid events at smaller venues.

It depends on the size of the venues... I might use a smaller one if I knew that there was some provision for seating that could be guaranteed and I knew it was going to be light to get in... I would need to be able to get in and out of the building relatively safely, so it's things like lighting and staff awareness I suppose in smaller venues (Victoria, 55)

Victoria's comments demonstrate the interrelated nature of factors impacting on perceived accessibility of venues; it is not only the size of a venue which creates difficulties but also interrelating factors such as the availability of assistance from staff and seating provisions.

9.6.2 Lighting

Difficulties associated with inadequate lighting were apparent in the comments of multiple participants who had residual vision. Adam commented that lighting levels had a significant impact on his ability to identify signs, with obvious implications for his ability to navigate. Low lighting levels may make safe movement around a venue impossible, and can create difficulties locating doors, toilets and services desks. These concerns directly influenced Adam's attendance at events, 'I think if I didn't have the lighting issue I'd probably do a bit more' and as mentioned above, Victoria actively avoided venues which she believed would be poorly lit. In contrast, Jack noted the problematic nature of the sudden reduction in light when entering some venues, although he believed that improvements had been made.

When you get in some places then it's the lighting that's a problem, because suddenly it can get dark... I think they're improving on lighting now and they don't dim the lights now until the last

minute... as long as they bring them up afterwards you can go out, the problem with outdoor festivals is you go in in the daytime and of course it all ends at night, all the lights go out and you're in the dark [laughing] (Jack, 57)

Thus far, the experiences of VI attendees have received little attention in research. As such, considerations of lighting at events has been lacking. However, the comments above suggest that changes to lighting may impact on the accessibility of events for VI attendees, particularly with regards to outdoor venues; the use of clearly lit paths between stages and facilities, flood-lighting between sets to ensure safe movement, and better-lit signage, could all be explored.

9.6.3 Physical barriers, the crowd environment and personal space

The physical environment and management of crowds at live events also created challenges. Victoria recalled one occasion at a popular music concert held at an arena, during which the interrelating factors of seat location (on a steep gradient), number of audience members, and a lack of lighting all contributed to safety concerns. Victoria also reported multiple incidences during which she had stumbled upon another attendee sitting on the stairs.

I don't think you could go to a gig on your own with really restricted vision 'cause I've had so many occasions where you've been trying to go down the steps and there's somebody sitting on them... but I've never had any awkwardness or nastiness or anything like that, but then I haven't booked anywhere that I wouldn't feel confident in going (Victoria, 55)

Victoria's concerns regarding the responses of other attendees, rather than her own safety, were echoed by Mike, who expressed concern for bumping into others or causing another person to trip, 'You'd like to think that if you tripped somebody up with your cane everybody would understand'. Mike worried that such an incident could result in an altercation.

If you go out somewhere and you're stood with...it could be thousands of people in a gig, and you slightly trip somebody up, add to the fact that they could have had a beer, you literally just don't know what people will do (Mike, 41)

Mike acknowledged that this concern would 'play on his mind', with obvious implications for attendance at live events. Crowds were also viewed as problematic. Hayley commented that crowds made attending events alone impossible, despite her independence in other contexts, 'I would do a lot of things by myself but that I wouldn't do that by myself, too crowded, too busy'. Similarly, James noted that crowds made safe movement around a venue difficult, particularly when using a mobility aid, 'it's very difficult with a dog or a stick to be able to sort of get around safely', and others reflected on the importance of maintaining their personal space and avoiding collisions with others.

They're [name of venue] alright because you've got plenty of room to move around (Jack, 57)

I guess I feel a lot more relaxed to enjoy a performance say where there's seating as opposed to if you're going to something where everyone's just all standing and mashed in together and that kind of thing... I just like to know kind of where is my space so I don't have to be thinking about, am I going to get bumped or pushed or am I going to step on someone (Natalie, 49)

Being seated was one way of avoiding concerns regarding personal space. As Victoria commented, 'I'm not having to manage my space or other people's space'. On the theme of personal space, the experiences of Ben were perhaps most concerning.

Somebody decided to put their hand down my back at one point and I thought they were going to stop at just that but they didn't want to and it was like, okay I don't think I like this... also at that gig somebody decided to hold my cane in the air and I think the singer of Manic Street Preachers he goes, yes yes alright I can see your cane [laughing] thanks a lot, so that was quite an interesting memorable moment I won't forget at Manic Street Preachers gig (Ben, 38)

It is worrying that an audience member took away Ben's cane; whether done in jest or in malice, Ben appeared to have found the experience embarrassing, if not upsetting. Violation of Ben's personal space and property has worrying implications for the security of VI attendees at live events, for whom manoeuvring out of potentially dangerous scenarios may be harder than for sighted attendees. His experience also highlights the possibility that mobility aids could increase the likelihood of an individual becoming a target of crime, or at best, misjudged humour. Ben's comments indicate a lack of awareness from the general public regarding the needs of those using mobility aids, which reflects research which has highlighted public ignorance relating to the mobility needs of VI individuals and their use of mobility aids (Gallagher, Hart, O'Brien, Stevenson & Jackson, 2011; Sanders, 2000).

9.6.4 Attending events alone or with a companion

It was apparent that across the sample, the challenges faced when attending live music events made attending with a companion essential. As discussed in Section 9.1.1 finding an appropriate companion with whom to attend was a critical factor in some participants' decisions to attend an event, and some stipulated a preference for attending with a sighted companion in order to circumvent difficulties associated with independent mobility and travel.

Obviously we're not able to drive to places, you tend to go to concerts in big groups of people anyway don't you... so we will always get a lift with someone, or we'll go on a train, or we'll catch a bus, or, usually when we go to concerts though we travel with friends (Laura, 45)

Having an understanding companion contributed to Adam's confidence at events.

I'd never be confident enough to go on my own 'cause it'd be a nightmare, and I would only go with people that I felt comfortable with... the kind of people where we can laugh it off if something happens you know, like I end up in the ladies looking for them (Adam, 37)

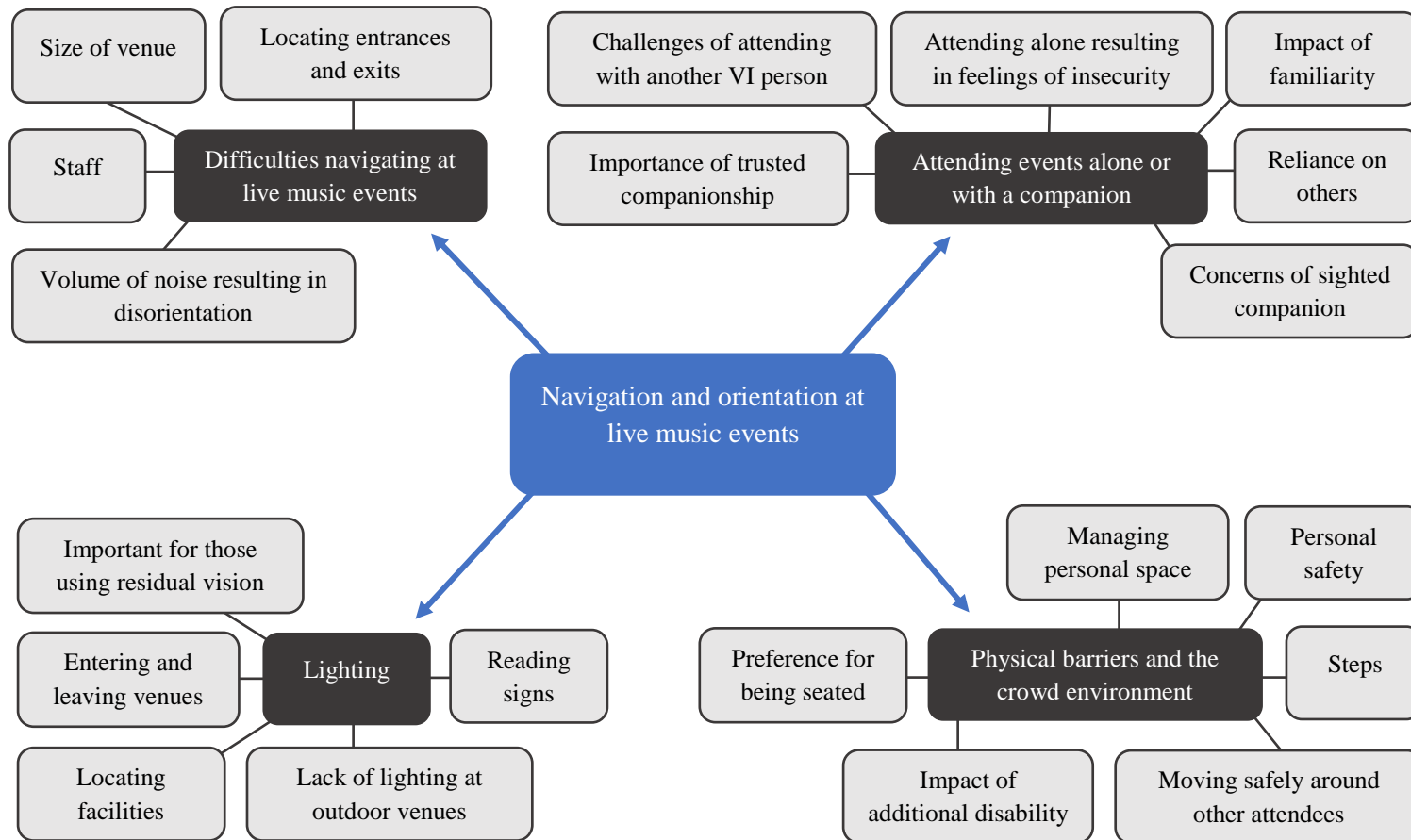


Figure 9.4: Thematic map of navigation and orientation at live music events.

Adam sought a companion with whom he was able to joke about any potentially awkward situations. Mike emphasised the importance of supportive and responsible companions. He recalled an occasion where he had been invited to a club night but, recognising his friend's lack of understanding and following advice from a family member, he had decided not to attend.

He wouldn't be bothered about just turning up to a night club by himself, couldn't understand that I needed to meet him outside because I can't see in a nightclub... I was just like, 'I don't know if I trust him', and I'd say it to my sister-in-law, and she was like 'well we're not going, it's up to you if you think that you can manage, but if you don't, just make an excuse and don't go', and that's eventually what I did do (Mike, 41)

Mike's experience highlights the difficulty of explaining the nature and impact of a VI to others, even to friends, and the lengthy decision-making process which might be involved in attending events. In contrast, Ben reflected on the challenges associated with attending events with a companion who was also had a VI.

The problem is that if you go with someone who is totally visually impaired, they're going to be just as much help as you are, so then you're obviously putting that pressure on them. I mean I don't mind taking a blind person... but I think they're going to get really freaked out and really stressed and then that might stress me maybe because they're getting stressed (Ben, 38)

It is notable Ben focuses on the psychological challenges which might arise in this context, with both members of the party worrying about the well-being of the other. Similarly, whilst several participants commented on the challenges associated with navigation at venues, only Victoria reflected on this task from the perspective of a sighted companion. She highlighted the apprehension and responsibility that this individual might feel when guiding someone at events.

The friend that tends to take me to Leeds Arena usually ends up a bit anxious before we've exited the gig, just 'cause of sheer number of people, and I don't have peripheral vision, so managing space with other people is really difficult (Victoria, 55)

Whilst no sighted guides were involved in the current study, Victoria recognised that live events could pose a stressful environment for these individuals, as they take on responsibility for the safety of another person. Research suggests that even for family members, understandings of how to support someone with a VI in mobility-related tasks may be lacking (Douglas, Pavey & Corcoran, 2008). A collaborative approach to information sharing, between VI attendees, companions, and venues, may be useful in overcoming any concerns that these individuals have, and further exploration of the experiences of this group would be of value.

Despite the preference that most had for attending events with others, some participants recalled occasions on which they had attended events independently. Eleanor admitted that she had not thought she would be able to attend a live event alone and that doing so had required

'bravery'. Familiarity with the venue and Eleanor's trust in the staff contributed greatly to her confidence in her ability to attend alone.

I saw an a cappella group there a few years ago on my own, I liked them so much that I thought stuff it, just because, James couldn't go for some reason... so I thought I'd go on my own, thought that was quite brave because I never thought I'd go to a concert on my own... the guys from this group Straight No Chaser, they actually said afterwards you know, come and join us for a chat and things... so I got one of the stewards to queue up with me so I could actually say hi to them and stuff so, you know they're so nice there (Eleanor, 53)

James's attendance at one event had been spontaneous, having bought tickets only the week beforehand, and his successful navigation to the event was largely thanks to the generosity of a stranger who was able to guide him to the venue.

There was one time I, quite madly really looking back on it, when I was a lot younger, decided I'm going to go to this because I have to go, it was when Paul McCartney years and years ago did a concert at the Albert Dock... I just thought, 'cause we didn't know how many concerts he was ever going to do... so I decided, right I'm just going to go so I just went, I got a train to Liverpool, I got a taxi, got out the taxi somewhere near Albert Dock and grabbed some unsuspecting passer-by and said are you going in, can you help blah-blah-blah and it sort of worked! It was quite stressful but I was very very very glad I did it (James, 55)

It had taken particularly well-loved artists, and a potential lack of future opportunities to see an artist perform live, to instigate James's decision to attend an event alone. Both Eleanor and James considered these experiences anomalies and despite their enjoyment, attending events with others was typically viewed as essential. Lily was the only participant to suggest that attending events alone might be preferable. Lily's view of music events as, first and foremost, a musical experience made social aspects of the experience less important.

When I go and see music I just want to listen to the music, I don't particularly want to chat to anyone... a lot of people who think music's very sort of background, and you're sitting in a pub talking to each other and I'm going listen to the band and yeah, so I'm quite happy, well depending on the venue to go to places on my own (Lily, 60)

Whilst Lily had a preference for attending events alone, her comments suggest that her confidence in doing so depended on the perceived accessibility of a venue.

9.7 Psychological barriers and challenges of attending live music events

Participants reported several challenges associated with the functional limitations imposed by a VI. However, it was apparent that psychological factors also impacted on the way that some participants thought about live events. Victoria highlighted that there may be several additional sources of worry for individuals who have a VI. She commented on the need for these individuals to moderate their engagement with live events, a psychological process of

considering the options and outcomes of aspects of the experience and whether they would be able to manage them, 'I think we probably all self-check, in a way, because there's things that aren't obvious to other people'. Comments from others suggested that these considerations may result in additional psychological strain. Mike commented that a fear of the unknown was a source of anxiety, but he had been actively thinking more positively about these scenarios and recognised that firstly, his concerns were often greater than the challenges faced, and secondly, that if he was to go to an event, he could trust in his wife to ensure his safety and enjoyment.

I didn't used to like going out in general... stuff that people think is regular and day to day, I would get worked up about... I've slowly taught myself to just go, 'It doesn't really matter' (laughs) whatever happens, chances are it's going to be okay and so you know, if I wanted to go to a gig with my wife I probably would now go because I know she would look after me and I know that chances are I'd be able to find the facilities and ultimately I would still enjoy it because it's the sound that I would go for (Mike, 41)

Mike also suggested that for attendees with a VI, live events could result in a sense of 'coping' rather than 'enjoying'. He reflected on the coping mechanisms which he had used to avoid potential difficulties, including not using the toilet.

In general, I'll just kind of get by certain stuff so if I have to wait three hours and not go to the toilet then I'll just do that because it's easier which probably isn't ideal... so it's coping mechanisms, how can I get through? And I suppose that's the thing, what will always play on my mind is, more how do I get through the evening? Rather than the mind-set of, how do I enjoy the evening? And if I enjoy it, it's a bonus, and that's the best way to sum it up (Mike, 41)

Mike considered these concerns to have less of an impact on him now than in the past, which has important implications for the psychological challenges experienced by individuals with different types of VI, and at different stages of sight loss and adaptation; those with more recent sight loss or changes to sight may experience the greatest psychological challenges.

Adam offered similar accounts of avoiding potentially difficult situations, 'I suppose it doesn't worry me but I do think about it and just like make sure I don't drink a lot before I go in'. Whilst Adam appeared to be joking, it was clear that using the toilet was a source of consideration, if not concern. Research exploring the experiences of disabled travellers and the use of public toilets by VI users has reported similar incidences of purposefully dehydrating before travel to avoid the need to use public toilets (Poria, Reichel & Brandt, 2010; Siu & Wong, 2013). Adam also noted that scenarios such as sitting in the wrong seat or finding a toilet were not only challenges for him, but also held the potential to disturb other attendees, and his companions.

People sit in the wrong seat all the time don't they but I suppose I'm always a bit super paranoid about things like that, and again toilets and there's always that kind of thing where you're

thinking oh god, I don't have to go to the toilet in the middle of the performance [laughing]
'cause somebody'll have to take me [laughing] (Adam, 37)

Adam had become hyper-aware of these scenarios, which only served to increase feelings of anxiety. Adding to this, Adam suggested that asking for help could, in itself, be a psychological challenge, 'I quite like to be independent, do my own thing... having to ask people to sort of say can you show us where they are is a bit of a, it's like oh man'. As mentioned above, for a group whose independence is already at risk, asking for help could contribute further to a sense of reliance on others (Du Feu & Fergusson, 2003; Piquart & Pfeiffer, 2014; Schinazi, 2007). Once again, participants' accounts highlight the need to ensure that VI attendees are able to access all relevant information regarding a venue's layout prior to attendance, and that the location of facilities is made apparent through adequate lighting, signage, and staff support.

9.8 Chapter summary

This chapter has provided a comprehensive view of participants' experiences with live music events. Most considered these events to be memorable experiences, and participants commented on the social, musical and educational experiences associated with attendance. Several factors were found to influence participants' decisions to attend events, including practical considerations and factors relating to the musical performance itself. Challenges and barriers relating to the unique experiences of attendees with a VI were also raised; navigation and orientation was one of the greatest concerns. Difficulties relating to low levels of lighting, manoeuvring around the physical environment, and management of one's personal space all impacted on enjoyment and feelings of personal safety. Several participants reported that in order to overcome these challenges, attending with a companion was essential, and the availability of free companion tickets was an important factor in ensuring that participants were able to attend events. These tickets had multiple benefits relating to access to transport at no extra cost and allowing access to more expensive seats which better suited attendees' needs.

In addition to practical challenges, a small number of participants highlighted the potential psychological barriers to attending live events. Many of the hidden apprehensions reported were associated with the broader issue of navigation, including locating facilities, a reliance on others for directions, and a fear of the unknown (reflected by participants' preferences for familiar venues). Despite the progress that has been made towards greater accessibility for deaf and disabled attendees, navigation clearly remains a source of concern for VI attendees.

Finally, it is acknowledged that the barriers identified in this chapter may not be unique to VI attendees. Individuals who have other disabilities, or no disability, may face similar challenges. However, many of the difficulties experienced stemmed from, or were compounded by, the functional and psychological impacts of having a VI.

10 Study 3- Survey

The current chapter outlines the third and final study carried out in this project. The chapter begins by outlining the aims and method of this survey study, before presenting demographic information and details of participants' musical backgrounds. The chapter provides important context for the explorations of everyday musical engagement provided in Chapters 11 and 12.

10.1 Aims

The aim of the current survey study was to systematically explore the multiple facets of musical engagement for individuals who have a VI. Studies 1 and 2 highlighted the importance of representing individuals across the adult age range, whose experience with both VI and music vary. This follow-up survey provided the opportunity to address this goal.

10.2 Method

10.2.1 Materials

The survey contained three main sections: demographic information, everyday musical engagement, and live music attendance (see Figure 10.1 for the survey map, and Appendix M for a copy of the survey). Following briefing and consent, the first section asked for demographic details and an overview of musical training. In order to establish age of onset of VI, respondents were asked to select which of four statements best applied to them. These statements were informed by definitions set out in Chapter 3, Section 3.4.1, and pilot study feedback. Initially, there were three categories: 'Congenital/onset before 4 years'; 'Early onset' (4-12 years); and 'Late onset' (after 12 years). However, feedback suggested that another category was needed ('Early-onset VI with changes') to represent those with changeable vision. Next, the survey explored musical engagement. Respondents rated their agreement with eight statements. Drawing on the work of Greasley and Gardiner (2015), statements 1-6 addressed the importance of music, the amount of music listening carried out, and the social aspects of engagement (e.g. sharing preferences and talking about music). Statements 7-8 were derived from Study 2, and addressed potential difficulties when accessing music.

Participants also rated their agreement with statements relating to the functions of music identified in Study 2: connecting with one's environment and to others, enjoying art and media, meeting therapeutic goals, expressing oneself, having a whole-body experience, and establishing routine.

Participants were then asked to respond to one of three sets of statements. These statements aimed to address the different experiences of participants from the 'Late onset', 'Early onset with changes', and 'Early onset' groups (see Figure 10.2 for survey logic for these questions).

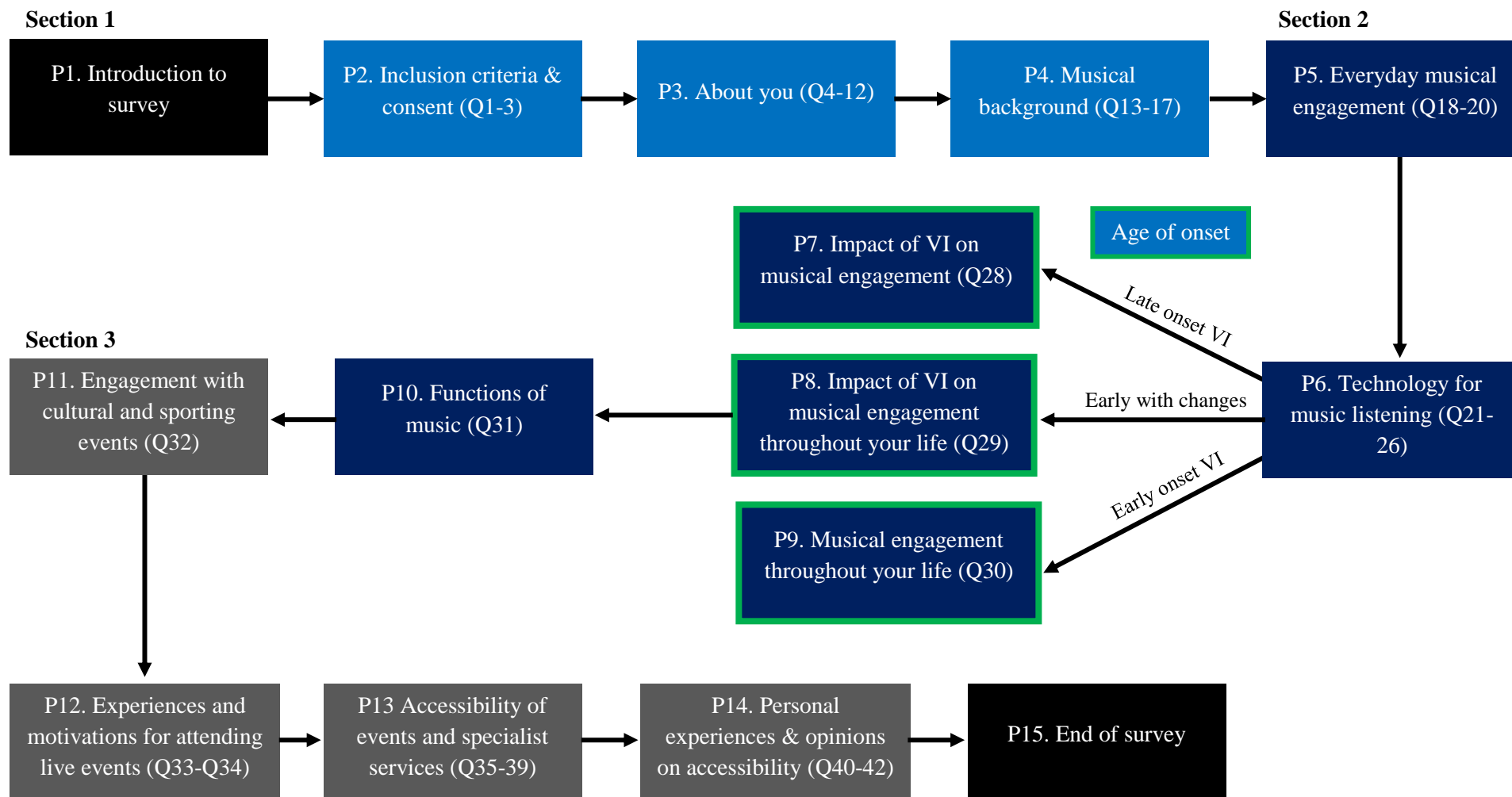


Figure 10.1: Study 3 survey map.

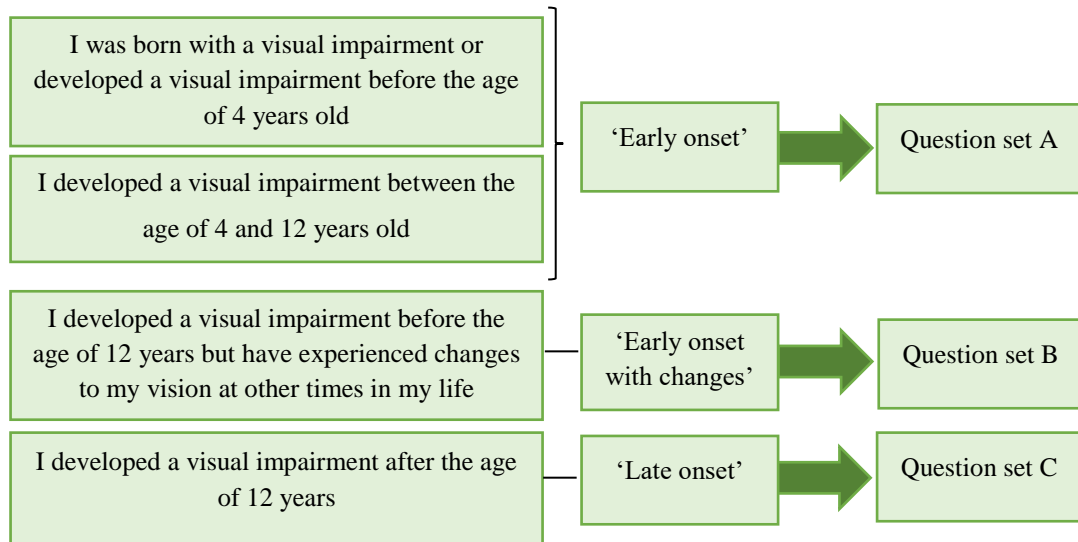


Figure 10.2: Logic for Question 28-30, impact of VI on musical engagement.

These statements were constructed to explore the potential impact of VI on musical engagement, the pervasiveness of beliefs relating to VI and musicality within the sample and wider society (participants responded to statements relating to their own beliefs and the beliefs of others), and musical engagement during childhood.

Participants were then asked about technology use, which included device choice, use of online services, and attitudes towards technology. This section also aimed to explore further the challenges identified in relation to technological engagement in Studies 1 and 2. Most of these questions were Likert-scale based, but open-ended responses were used to gather data relating to preferred devices (useful in case a participant’s preferred device was not listed) and to identify any factors impacting on engagement which had not yet been considered.

The final section of the survey explored participants’ experiences of live music, through both quantitative and qualitative data. This section aimed to offer a comprehensive account of this topic, including insight into the number of events attended, motivations for attending, and barriers to attendance. Questions addressed topics identified as important by participants in earlier stages of data collection. Statements relating to motivations for attendance addressed the social motivations (statements 1-2), educational motivations (statements 3-5), the perceived difference between live and recorded listening experiences (statement 6) and motivations relating to escaping everyday life (statements 7 and 8). Similarly, statements relating to accessibility of events addressed topics which were highlighted as important during Study 2: purchasing tickets, accessing information, staff understanding, navigation, and the potential impact of having a VI on the live music experience. These statements aimed to capture the experience of attending live events, from ticket purchase through to attendance.

Open-ended responses allowed participants to reflect on their experiences at live events, factors impacting on their enjoyment, and suggestions for how accessibility might be improved. The positioning of these questions at the end of the survey allowed participants to reflect on topics which had been explored and any additional factors which had not yet been considered.

10.2.2 Procedure

A pilot of the survey was carried out with three participants who had taken part in Study 2. Feedback included the need to increase the size of the asterisk where answers were required (important for those using residual vision) and the length of time needed to complete the survey, which was reported at around 45 minutes. To reduce time of completion, and following recommendations of the participants, some of the questions with multiple options were simplified (including shortening statements or reducing the number of options) or removed.

The survey opened with an information page which outlined the aims of the research and detailed the prerequisites of participation: 1) Having a visual impairment or severe visual impairment which has been identified by an optometrist, and 2) Being 16 years of age or older. This ensured that all participants were fully informed prior to participation. This page provided participants with contact details with which to contact the researcher should an alternative survey format be preferred, or if their eligibility for participation was in doubt. This page also gave guidance on completing the survey, including the responses required for different types of questions and, for large format printed copies, a note on changing page orientation. A large-print format questionnaire was requested by two organisations, although no paper surveys were returned (one organisation confirmed that participants had completed the survey online). Participants were able to leave their contact details at the end of the survey, should they wish to know more about the survey or its results. For those that completed the survey over the phone, information was read aloud, and verbal consent was obtained. 85 participants completed the survey online and nine completed the survey by phone or Skype; participants requested to complete the survey over the phone because they felt it would be faster and easier, or they lacked confidence using an online survey system.

10.3 Results

10.3.1 Structure of results

The analysis that follows is split into three main sections. The first section is discussed in the remainder of this chapter, which outlines demographic details and musical training of the sample. Chapter 11 analyses data regarding everyday musical engagement, including functions of music, a comparison of engagement between early- and late-onset groups, and participants' use of technology for music listening. Chapter 12 then addresses live music experiences. Many of the themes identified in the open-ended responses reflect those factors explored quantitatively.

For this reason, these data are considered simultaneously; comments from participants' qualitative responses are used to further explore results from the quantitative data.

10.3.2 Demographics

Age

Participants were aged from 16 and 83 years, with a mean age of 44.56 years ($SD=16.39$).

There was just one participant aged 76 years and above (see Figure 10.3). This may reflect the promotion of the survey primarily through email and social media. Age UK (2016) report that a quarter (26%) of people aged between 65 and 74 years, and around three-fifths (61%) of people aged 75 years and above, do not regularly use the internet. This highlights the importance of offering online surveys in alternative formats, though, only four of the nine participants who completed the survey by phone were aged 65 years or above.

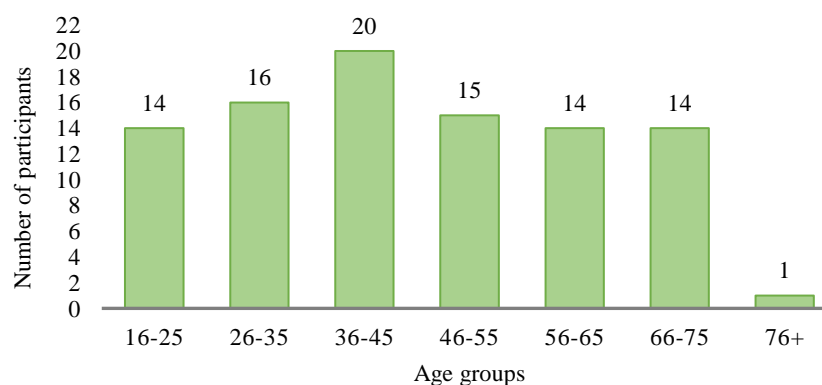


Figure 10.3: Age distribution of survey participants.

Level of education

The majority of participants had achieved either school-level exams such as GCSEs, A-Levels or an equivalent diploma ($n= 30$). Six participants (6.4%) had achieved no educational qualifications and five had achieved a higher-level degree such as a Doctorate. The level of education of the current sample was higher than might be expected. Slade and Edwards (2015) found that 33% of 1500 interview participants with a VI had no qualifications, and just 27% had a degree or higher-level qualification. In the current study, 51% of participants had achieved this level of qualification. This may reflect the dissemination of the survey on social media using metadata tags such as 'research' and 'PhD', which may have attracted participants with a higher level of education, and/or the high number of participants aged below 65 years (84%) who are more likely to have qualifications than older adults (Slade & Edwards, 2015).

Geographic location

Responses were gathered from across UK, the majority coming from the South East ($n= 29$). This may reflect the number of people living with VI in different regions. The RNIB (2018b) estimate that in 2016, 12,140 people were living with SSI in the North East, compared to

43,790 in the South East. It should be noted that these figures reflect differences in population density rather than differences in prevalence (RNIB, 2018b). There was also one participant from Canada, Chile, France, Ireland, Germany, and Spain, and two from the USA.

Details of visual impairment

Of the 94 respondents, 79 identified themselves as SSI and 15 as SI. 37 reported that they had a degenerative eye condition. Some of the most frequently reported causes of VI were Aniridia (absence of iris), Glaucoma, Optic atrophy (optic nerve damage), and Retinal conditions such as Retinopathy of Prematurity. As seen in Figure 10.4, the majority of participants had been born with a VI or developed a VI before the age of 4 years ($n= 57, 60.6\%$), five had an early-onset VI but experienced changes to their sight at other times, three had developed a VI between four and twelve (3.2%), and 29 had developed a VI after the age of 12 years (30.9%).

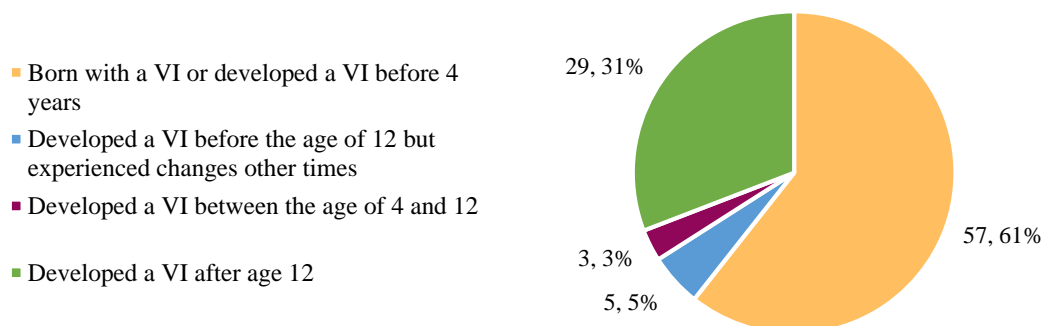


Figure 10.4: Age of onset of participants' visual impairments.

Additional disabilities

Participants were asked to indicate whether they had an additional disability, and if yes, to describe this qualitatively. Thirty-four respondents (36.2%) reported an additional disability. For use in later analysis, responses were organised into one of four categories: hearing impairments or auditory processing disorders ($n= 7$); physical impairments or conditions impacting on motor skills ($n= 19$); mental-health conditions ($n= 5$); and multiple or chronic health conditions ($n= 10$). It should be noted that some participants' responses related to more than one of these categories, and a small number were not categorised in the above groups.

Attendance at mainstream or specialist school and Braille literacy

34% of participants had attended a specialist school for children with a VI and 66% had attended a mainstream school. This reflects figures reported by the RNIB, who estimate that around two-thirds of children with a VI are educated in mainstream schools (RNIB, 2016c).

Forty participants read Braille (42.6%), a far higher proportion than the estimated 5% Braille literacy amongst VI individuals in the UK (Creaser, Spacey & Hicks, 2012). There was a significant association found between attendance at a specialist school and Braille literacy (χ^2

(1, $N=94$) = 17.06, $p < 0.001$), suggesting that Braille literacy was a greater focus at specialist schools than at mainstream schools. This finding is consistent with declining levels of Braille literacy, attributed primarily to the transference of the education of VI pupils from specialist schools to mainstream schools (Keil & Clunies-Ross, 2002; RNIB, 2014c).

10.3.3 Musical training

Greasley and Gardiner's (2015) musical training measure provided an overview of participants' musical experience. The measure consisted of four questions. The first ('Have you ever' statements) asked participants to indicate which of seven musical activities they had taken part in (score of 0-7). The second asked about participants' highest music qualification (score of 0-6). The third explored instrumental and singing training, asking participants to choose one of eight statements which best described their musical experience (score of 0-7). Question four asked if participants had ever worked in a musical field, and if yes, to describe this work.

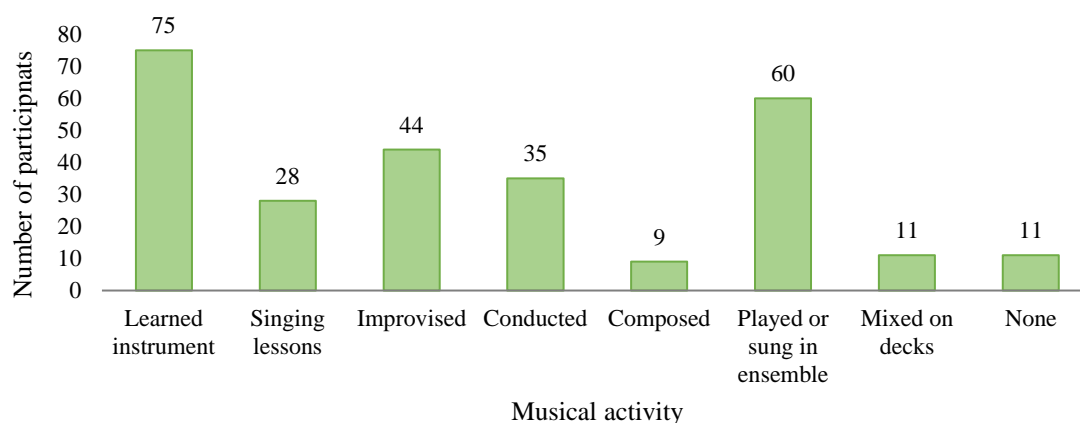


Figure 10.5: Number of participants who had taken part in each musical activity.

Scores for the first item were low ($M=2.81$, $SD=1.86$). Most participants ($n=20$) had taken part in one of the activities listed and 11 had not taken part in any. As seen in Figure 10.5, the most common activity was learning to play an instrument, followed by playing or singing in an ensemble. Scores on the second ($M=1.01$, $SD=3.17$) and third item ($M=2.72$, $SD=2.15$) were also low; half of the sample had no formal music qualification (see Figure 10.6), ten had never played an instrument or sung, and the majority ($n=26$) used to play an instrument or sing.

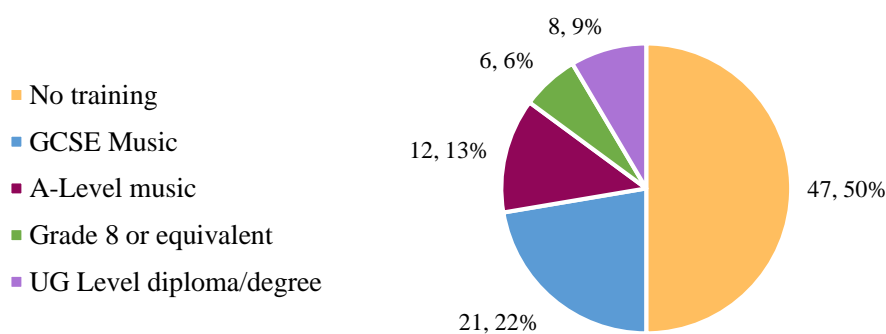


Figure 10.6: Participant’s highest level of musical qualification.

However, a small number did achieve higher scores on the third item. Five reported a moderate standard of playing on two or more instruments, and eight reported a high standard of playing on two or more instruments. This suggests that in the current sample, informal training was a greater focus of musical learning than attainment of formal qualifications.

Twenty-three participants had worked in a musical field, in performance, composition, lyric-writing, business, marketing and education (see Appendix N for full list of responses).

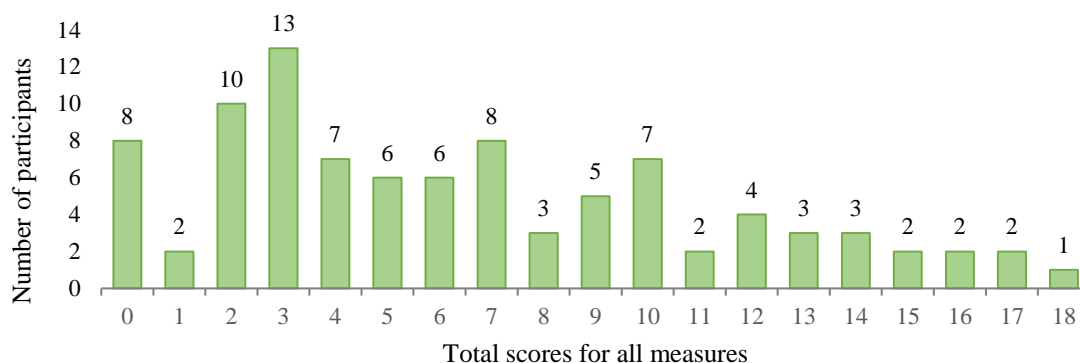


Figure 10.7 Total scores for musical training measure.

The total music training score was calculated. The maximum possible score was 20. The mode score was 3 (see Figure 10.7), and the mean score was 4.94 (SD= 3.25). The Cronbach's alpha for the 3 items ($\alpha = .840$) showed that the measure was highly reliable; this value was slightly lower than the alpha value reported by Greasley and Gardiner (2015), $\alpha = 0.875$.

Finally, sixteen participants (17%) read Braille music. This figure may reflect the generally low levels of musical training amongst the sample, and evidence that whilst current Braille music literacy is not declining, the number of individuals learning Braille music remains low (Firman & Zimmerman, 2016). As with literary Braille, there was an association between attending a specialist school and the ability to read Braille music, $\chi^2 (1, N= 94) = 4.235, p = 0.04$.

10.4 Chapter summary

This chapter has outlined the methods of Study 3 and has outlined the demographic and musical background of participants. The sample was well-distributed in terms of age, gender, and geographic location, although a large proportion of the sample had a congenital or early onset VI. Overall, the sample exhibited a low level of musical training, although some scored highly on questions regarding instrumental or singing experience, and a small number read Braille music notation. These findings indicate that despite the musical focus of the current study, those who were less musically trained were not disinclined to participate.

11 Study 3- Everyday musical engagement

This chapter presents data relating to the everyday musical engagement of respondents to the final survey study. The analysis that follows considers participants' level of musical engagement, the role that music played in their lives, and their use of technology for music listening. This chapter includes data regarding the potential impact of VI on engagement with music, and comparisons of the experiences of those with early- and late- onset impairments.

11.1 Level of musical engagement and the impact of visual impairment

Participants were asked to report how much music they listened to in an average week. Participants reported listening to an average of 21.02 hours of music per week, with the majority listening to 0-9 hours per week (see Figure 11.1). Figures for listening as a sole activity were lower (an average of 8.27 hours per week), reflecting the tendency for a greater amount of background than focused music listening (Greasley, 2008; Juslin & Laukka, 2004).

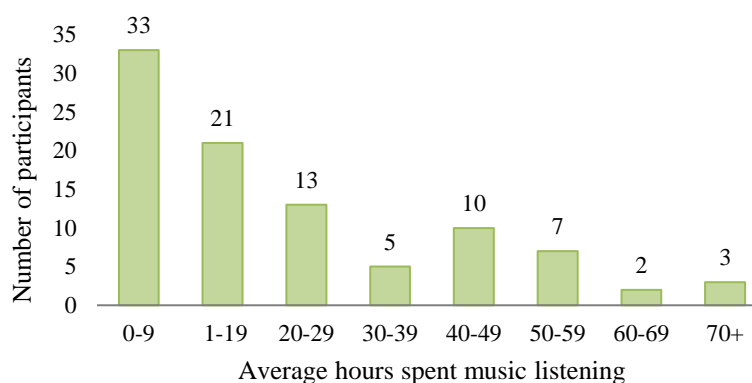


Figure 11.1 Average hours spent listening to music.

Participants were next asked to rate their agreement with eight statements relating to their musical engagement. As seen in Figure 11.2, the highest scoring statement was 'Music is very important to me'. Statements relating to listening to music as much as possible, preferring self-chosen music, and talking with others about music, also received high mean ratings. In contrast, responses to statements 7 and 8 indicated that finding new music, and the effort involved in doing so, were not barriers to musical engagement.

In addition to these eight statements, a series of statements were constructed to address the different experiences of those with 'Early onset', 'Early onset with changes' and 'Late onset' VI (for details regarding construction of these questions, see Chapter 10, Section 10.2.2). Each group rated their agreement with a different set of statements; group sizes were not equal for these responses (mean ratings of all statements by each group can be found in Appendix O). Firstly, participants from the 'Late onset' and 'Early onset with changes' groups rated their agreement with statements relating to the impact of changing vision on musical engagement.

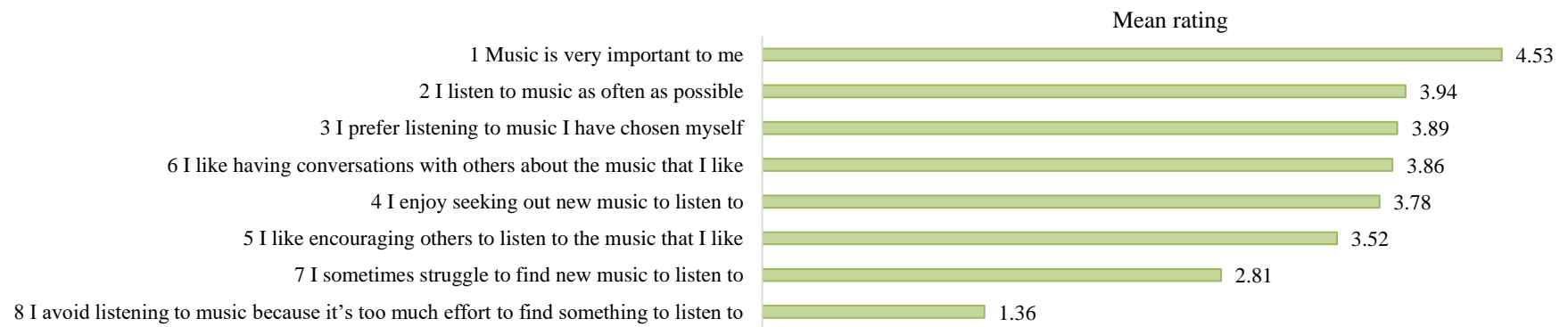


Figure 11.2: Mean ratings of musical engagement statements.

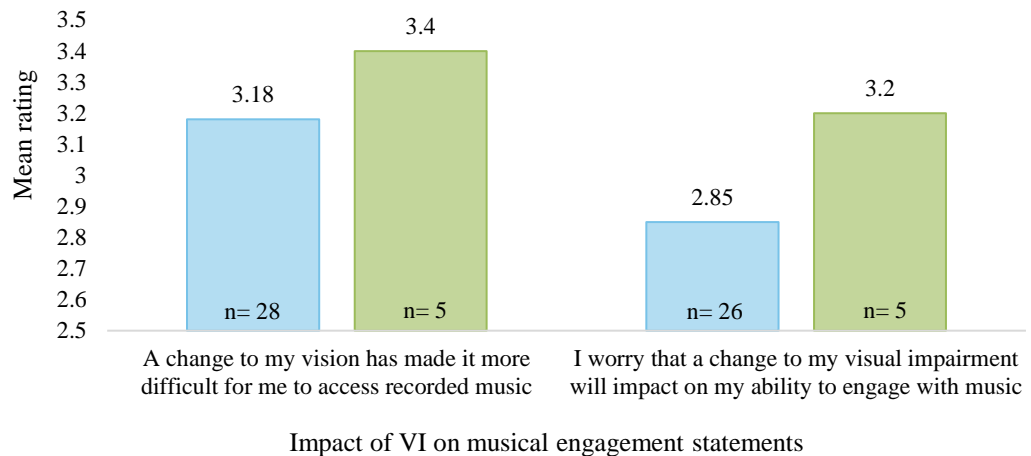


Figure 11.3: Comparison of mean ratings from ‘Late onset’ and ‘Early onset with changes’ groups.

As seen in Figure 11.3, both groups mildly agreed with both statements, with those experiencing changes to their sight at different points in their life showing slightly greater concern towards the impact of reductions in vision on musical engagement.

All participants were asked to consider the impact of a VI on the importance of music. Respondents rated their agreement with one of two statements, ‘Music has become more important to me because of my visual impairment’ (the ‘Late onset’ group) and ‘Music is particularly important to me because I am visually impaired’ (the ‘Early onset’ and ‘Early onset with changes’ groups). Figure 11.4 shows overall agreement amongst all three groups that there is a relationship between having a VI and the importance of music in their lives.

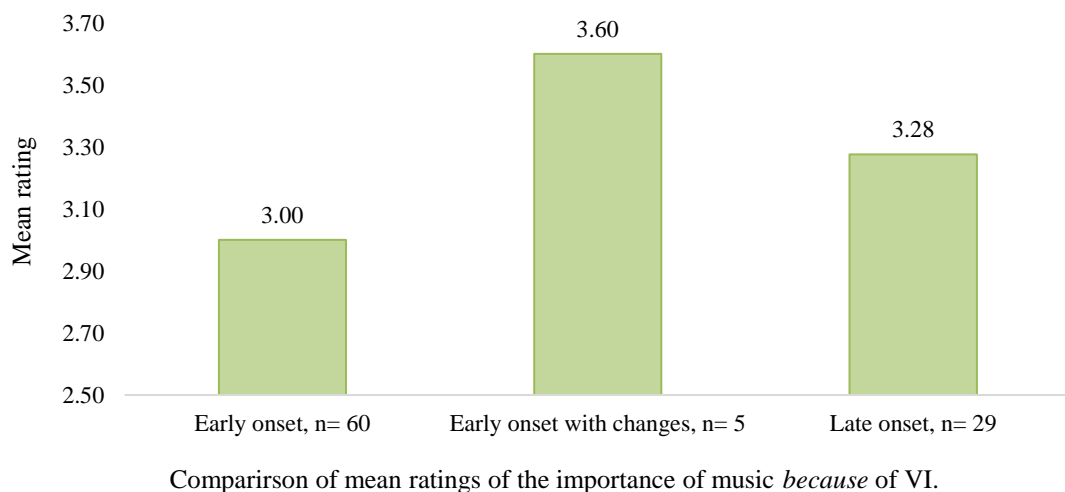


Figure 11.4: Mean ratings of the statement ‘Music has become more important to me because of my visual impairment’ by the ‘Late onset’ group, and ‘Music is particularly important to me because I am visually impaired’ by the ‘Early onset’ and ‘Early onset with changes’ groups.

The ‘Late onset’ group were also asked whether they had listened to more music following the onset of their impairment. Despite the importance attributed to music after sight loss, nearly as many disagreed ($n= 10$) as agreed ($n= 13$) with this statement ($M= 3.31, SD= 1.17$).

All three groups were asked to rate their agreement with the statements ‘I consider music to be a constant in my life’ and ‘Music is a hobby which remains/is accessible to me’. There was overall agreement with both statements (see Figure 11.5). The most notable difference between the groups related to the perception of music as an accessible hobby; the ‘Early onset with changes’ group gave this statement a much lower mean rating than the other groups. Also, this rating is substantially lower than the group’s rating of music as a constant ($M= 4.6, SD= .55$). This may suggest some disconnect between the role of music as a constant and its ability to fulfil this role due to reduced accessibility following changes to vision.

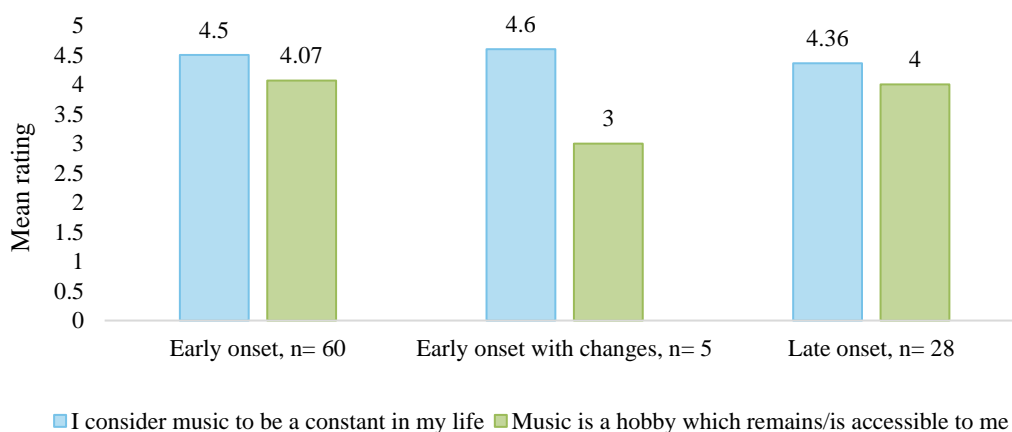


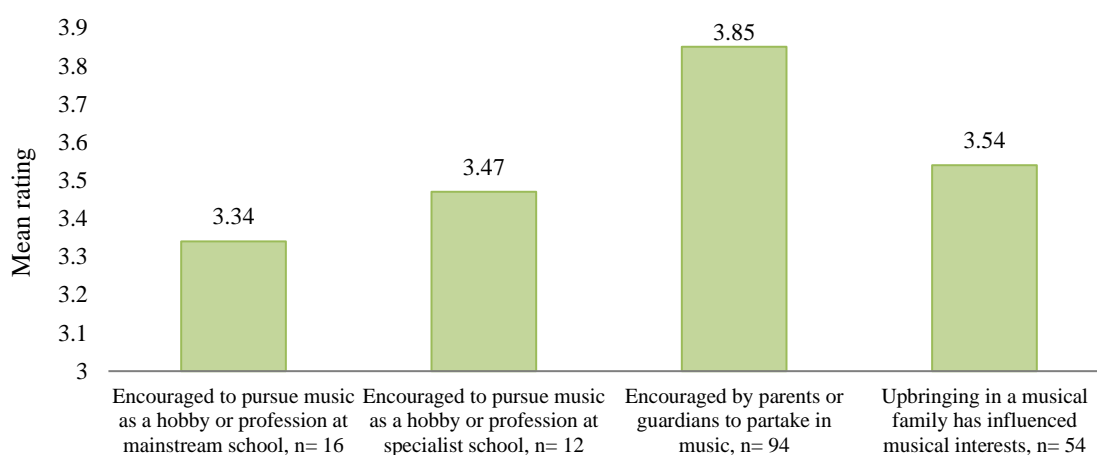
Figure 11.5: Mean ratings of two statements by the ‘Early onset’, ‘Early onset with changes’ and ‘Late onset’ groups.

Statements relating to concepts of blind musicianship were also rated by all three groups. Responses were grouped to consider ratings across the sample. The majority of participants ($n= 56, 59.6%$) agreed or strongly agreed that ‘People assume that I have heightened musical abilities due to my visual impairment’ ($M= 3.57, SD= 1.31$). However, responses regarding whether they themselves believed in this association were more mixed; over half ($n= 53, 57%$) disagreed with the statement ‘I believe there is an association between having a visual impairment and having heightened musical abilities’ ($M= 2.48, SD= 1.30$).

One explanation for participants’ responses to the second statement could be level of musical training. However, comparison of mean ratings of agreement between those who had no musical training ($M= 2.70, SD= 1.57$) and those who had a high level of training ($M= 2.20, SD= .919$) did not show any significant difference ($t(14)= .870, p= .398$).

11.1.1 Music during childhood

Of those with an early onset VI, 90.6% agreed or strongly agreed that ‘Music was important to me during my childhood’ ($n= 65, M= 4.54, SD= .95$), but ratings regarding musical ability at this time were more mixed, with 60% agreeing to some extent ($n= 65, M= 3.72, SD= 1.30$). These participants were also asked about factors influencing engagement at this time. Firstly, participants reflected on the encouragement they received at either mainstream or specialist school. The statement relating to specialist school gained a slightly higher mean rating than the statement relating to mainstream school, 30% of those who responded to the statement relating to mainstream school, and 34% of those who responded to the statement relating to specialist school strongly agreed that they had been encouraged to pursue music at school.



Factors influencing musical engagement during childhood

Figure 11.6: Factors influencing musical engagement during childhood.

Next, participants considered the impact of parental encouragement and family upbringing on musical engagement. Of all the factors explored in this question, participants agreed most strongly that parental encouragement had impacted on their musical engagement. As respondents were able to select which statements they responded to in this question, the number responding to each of these statements was variable, but the high level of agreement across the sample regarding the impact of parental encouragement confirms that this factor was considered important by many.

11.1.2 Functions of music

Participants agreed to some degree with all of the functions of music statements. The statements relating music as a comfort and a therapeutic tool gained the highest mean ratings, whilst those relating to visual art and media, and music as an escape from VI received the lowest mean ratings (see Table 11.1). Statements relating to the role of music in identify and self-expression, and its use as part of a daily routine also received high mean ratings.

Comparison analysis showed significant differences in the functions fulfilled by music dependent on severity of VI (see Table 11.2 for means and t-test results). Table 11.2 shows a particular difference in functions relating to music as means of connecting with one's environment and as an escape from VI, with these functions being more important to those with a less severe impairment. However, there were no differences according to age of onset.

11.1.3 Technological engagement for music listening

Data relating to technological device use, use of online services, the impact of technology of musical engagement, and potential barriers to technological engagement is presented in the remainder of this chapter.

Figure 11.7 gives an overview of participant responses to their use of nine devices for music listening, 'Never', 'Sometimes' or 'All the time' (the latter categories are collapsed here to indicate overall use). Data showed that radio, computers (including laptops and tablets) and smart phones were the most commonly used devices, whilst vinyl and cassette players were typically 'Never' used.

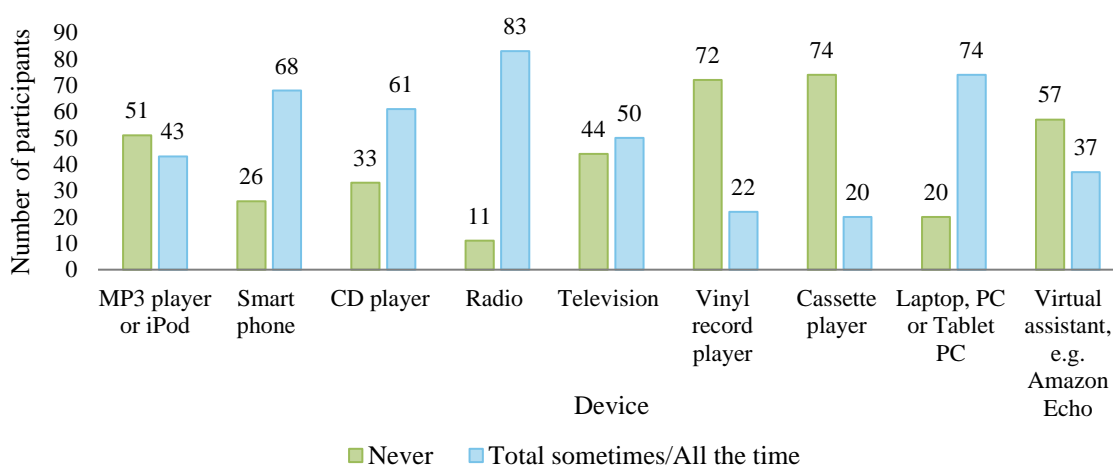


Figure 11.7: Frequency of technological device use.

Participants were also asked to reflect on their preferred device for music listening in an open-ended response; smart speakers were most frequently cited ($n= 19$), followed by smartphones ($n= 15$) and CD players ($n= 15$). Additional devices listed included the specialist devices BrailleNote and Daisy player ($n= 3$) and Bluetooth speakers ($n= 2$), whilst two participants preferred to use vinyl record players and one reported a preference for using a cassette player.

Next, participants were asked to rate the importance of various factors on device choice. Sound quality, ease of use, and familiarity were considered most important, whilst synchronicity with other technology was considered the least important factor (see Figure 11.8). However, all of the factors listed were considered of some importance.



Figure 11.8: Mean ratings of the importance of factors influencing technological device choice.

Participants were also asked to list any additional factors in an open-ended response. Listening context ('Location' and 'Depends if I am at home or travelling') and cost were relevant to some. One participant highlighted the benefit of accessing low cost second-hand recordings, 'now that these are so cheap to buy in charity shops', whilst another commented that the cost of having a vinyl collection converted to MP3 was too high, despite the difficulties they had identifying items in their physical collection following their sight loss.

Open-ended responses were also used to consider factors influencing participants' preferred device choice. TA identified 14 factors, some of which reflected those listed in Figure 11.8 (see Figure 11.9). Once again, ease of use was considered most important, followed by musical variety, accessibility, and sound quality. Psychological benefits (e.g. 'radio is managed by people, you feel part of that people'), size of device, cost, and the availability of non-commercial listening, were mentioned by a small number of participants.

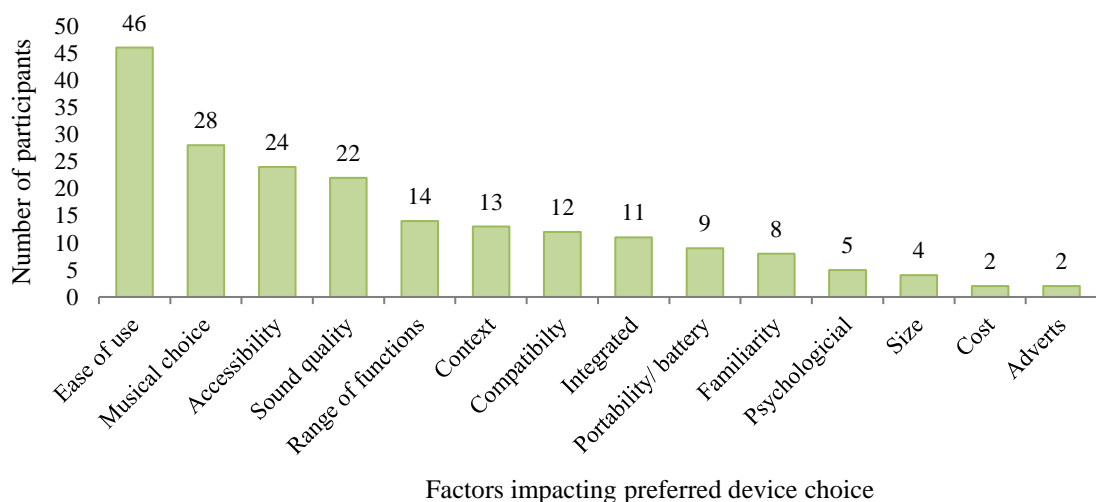


Figure 11.9: Factors influencing preferred technological device choice cited in open-ended responses.

Table 11.1: Mean ratings of ‘Functions of music’ Statements 1-1, from highest to lowest.

Musical engagement statements	Mean	Median	Mode	SD
Music is a comfort to me	4.34	5	5	.89
Music is a therapeutic tool for me	4.00	4	5	1.14
Music offers a means of self-expression	3.99	4	5	1.24
Music is an important part of my identity	3.98	4	4	.99
Music listening is an important part of my daily routine	3.98	4	5	1.07
Music listening is a whole-body experience, not just an auditory experience	3.78	4	5	1.21
Music offers a way for me to connect with family and friends	3.53	4	4	1.09
Music helps me to enjoy film and television	3.31	4	4	1.25
Music helps to connect me to my environment	3.20	3	4	1.19
Music offers an escape from my visual impairment	2.97	3	1	1.48
Music helps me to enjoy visual art and media	2.79	3	4	1.25

Table 11.2: Results of T-Test comparing ratings of sight impaired and severely sight impaired participants.

Musical engagement statements	Sight impaired		Severely sight impaired		t-test
	M	SD	M	SD	
1 Music helps to connect me to my environment	3.80	.56	3.09	1.24	.001*
2 Music helps me to enjoy film and television	4.07	1.03	3.16	1.25	.007*
3 Music helps me to enjoy visual art and media	3.47	.99	2.66	1.26	.021*
4 Music offers an escape from my visual impairment	4.00	1.12	2.77	1.46	.002*
5 Music is an important part of my identity	4.33	.82	3.91	1.02	.133
6 Music offers a way for me to connect with family and friends	3.67	.62	3.51	1.16	.442
7 Music is a comfort to me	4.73	.46	4.27	.93	.061
8 Music offers a means of self-expression	4.07	1.34	3.97	1.23	.794
9 Music listening is a whole-body experience, not just an auditory experience	4.27	.80	3.68	1.26	.027*
10 Music is a therapeutic tool for me	4.53	.83	3.90	1.16	.047*

The above factors were considered in relation to the three most frequently preferred devices: smart speakers, CD players, and smartphones. Reflecting the above findings, ease of use was the most, or one of the most, frequently cited benefits for all three devices. Perhaps more notable was the finding that smart speakers were associated with accessibility and choice of music, suggesting that these devices could be a valuable means of accessing music for VI users.

In addition to technological devices, participants were asked to indicate the frequency with which they used three types of online service: streaming (e.g. Spotify or Amazon music), video hosting sites (e.g. YouTube) and internet radio stations. As seen in Figure 11.10, video hosting sites were used most frequently (81.9% of participants used this service at least sometimes), followed by internet radio stations (67% of participants used this service at least sometimes). Streaming services were less popular, with nearly half reporting that they ‘Never’ used this type of service. The number of participants using this type of service was lower than might be anticipated, given upward trends in music streaming use (Global Music Report, 2019).

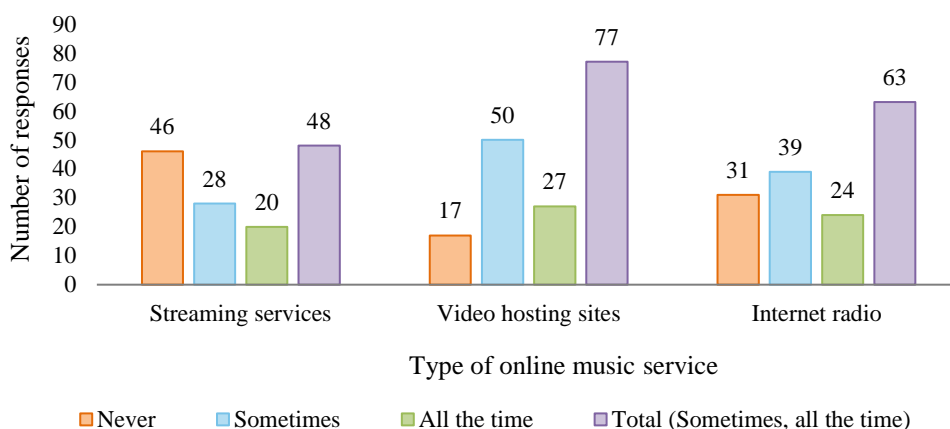


Figure 11.10: Frequency of participants' use of online music services.

Next, participants rated their agreement with four statements relating to their engagement with technology for music listening.

Table 11.3: Mean ratings of technological engagement statements.

Technological engagement statements	Mean	Median	Mode	SD
Technological developments have made music listening easier for me	4.23	4	5	1.00
I actively seek out new technology for music listening	2.98	3	2	1.34
I prefer to listen to music from a physical collection than in a digital format	2.59	3	3	1.23
I like streaming services such as Spotify as they take away the need to choose music	2.36	2	1	1.26

As seen in Table 11.3, participants agreed to some extent with three of the four statements. Most participants (85.11%) agreed that technology had made music listening easier (see Figure 11.11). Responses regarding preferences for physical collections and actively seeking out technology were more mixed, and over half (52.13%) disagreed that streaming services are beneficial because they reduce the need to choose music.

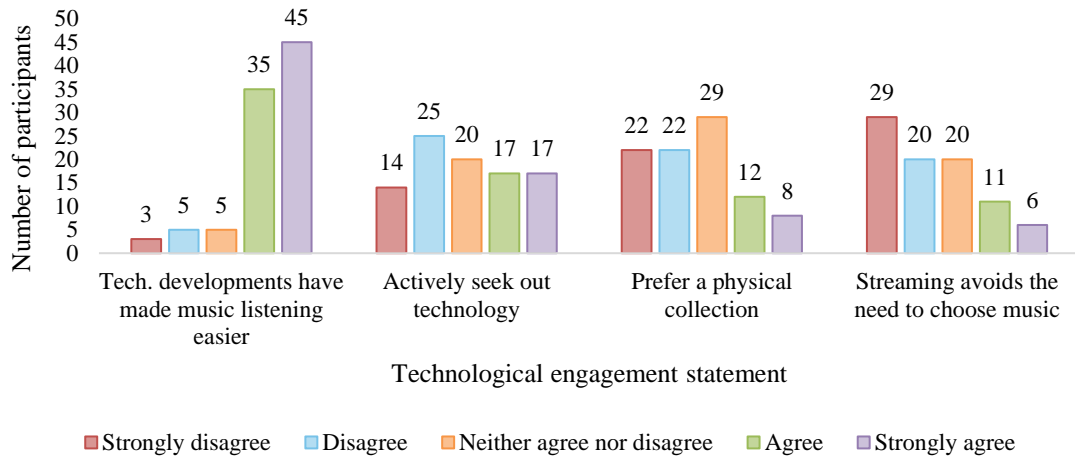


Figure 11.11: Participant responses to four musical engagement statements.

Finally, participants were asked to consider the potential challenges associated with technology use for music listening. As seen in Figure 11.12, participants agreed to some extent with all eight statements.

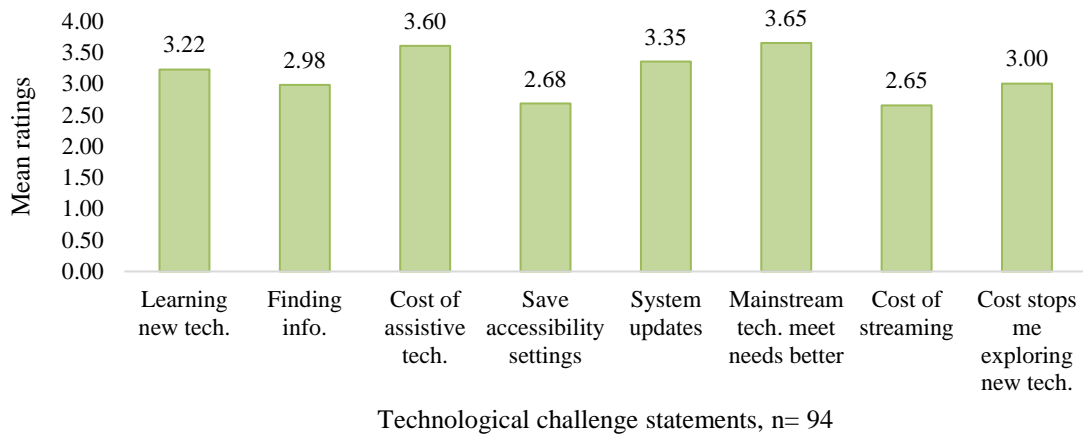


Figure 11.12: Mean ratings of agreement with technological challenge statements.

The statements which received the highest mean ratings were, ‘Mainstream devices meet my needs better than specialist assistive devices’ and ‘I prefer mainstream devices because specialist assistive devices cost too much’, reflecting the low incidence of specialist device use in the current study. The statement ‘Learning to use new technologies and devices is a

challenge for me' also received a high mean rating, whilst participants agreed less strongly with statements regarding the cost of streaming and difficulties saving accessibility settings.

11.2 Discussion

The above analysis has progressed through data relating to participants' everyday musical engagement. Several key findings are apparent. Firstly, most participants attributed a high level of importance to music. The number who strongly agreed that music was important to them ($n=62$, 66%) was even greater than figures reported by Greasley and Lamont (2006), who found that of 120 respondents, thirty-five (22.4%) rated musical importance at 5 ('Extremely important') on a five-point Likert scale. Reports of participants' active engagement with music and the use of music to fulfil various functions may partly explain this finding, although it should also be noted that the self-selected nature of the sample could have led to a high number of participants who believed music to be important.

Despite the importance of music, data suggested that sight loss may impact negatively on musical engagement. Those with late onset VI agreed that a change in vision had made it more difficult to access music, and they worried that a future change could further impact on musical engagement. This group also agreed that music had become more important since the onset of their VI, which may reflect evidence that music plays a particularly important role in the lives of individuals who have a VI (Park et al., 2015). Whilst there were no significant differences in the uses of music by those with an early- or late- onset VI, differences were found between those who were SI and SSI. The greater use of music for functions relating to the enjoyment of film, television and art by those with SI is perhaps not surprising, given the visual-based nature of these activities, but the greater use of music for functions such as connecting with one's environment, escaping VI, and meeting therapeutic goals, was not anticipated. A less severe impairment was associated with a greater use of music to fulfil functions in everyday life.

There was overall agreement amongst those with an early-onset VI that music was important during childhood. There was a greater mix of responses regarding musical ability, but many agreed that they did display musical ability as a child, reflecting evidence that there may be a greater level of musical interest and ability in children who have a VI (Matawa, 2009; Ockelford & Matawa, 2009; Pring & Ockelford, 2005). However, just 22 (23.4%) agreed to some extent that an association between VI and musical ability existed. Both school and family were reported to impact on musical engagement during childhood, with parental encouragement being the biggest influencing factor. In contrast to the suggestions of participants in Study 2, music appeared to have been encouraged similarly in both specialist and mainstream education contexts. Without a sighted comparison group, it is not possible to say whether a sighted group would have given different responses regarding musical

engagement during childhood, but the above findings do suggest that music was important to the current sample at this time.

Use of technology for music listening varied across the sample. Findings relating to popular devices were not surprising, with well-established technology such as radios and CD players, and multifunctional devices such as smart phones and computers, being used frequently. It is also encouraging that participants appeared to have benefited from recent technological developments, with smart speakers being the preferred listening device of many. In contrast, for a small number, older devices such as cassette and vinyl players were preferred. Open-ended responses suggested that these devices may offer a different set of benefits to those associated with contemporary technology. This includes the use of these devices to meet psychological goals (e.g. 'Nostalgia') and the sound quality associated with analogue audio devices. Also, it is notable that just two participants reported the use of specialist devices. This may reflect overall agreement that mainstream devices met listening needs better than specialist devices, and that specialist devices often incur a greater cost than mainstream devices (Foley & Ferri, 2012).

Data relating to the use of online services also highlighted some interesting findings. The number of participants using internet radio at least sometimes (67%) was nearly as high as for the use of video streaming (81.8%). Figures reported by Radio Joint Audience Research (Ofcom, 2017) suggest that in 2017 (1st quarter), internet radio accounted for just 7.8% of radio listening hours amongst adults. The use of internet radio in the current sample may reflect the popularity of radio, more generally, amongst the sample, and the large number of internet stations run by, and for, VI users worldwide (see whitestick.co.uk for some of these stations). Also, the popularity of video streaming is also surprising given the visual nature of these sites; this is encouraging in suggesting that these free sources of music are accessible to VI users. Similarly, the relatively low use of music streaming was not expected, given the current prevalence of music streaming worldwide (Global Music Report, 2019). These services may have been considered less able to meet the needs of participants than other sources of music.

Overall, participants agreed that technological developments had made music listening easier, reflecting literature which highlights the impact of technological developments on the amount of music listening carried out by individuals, and the variety of contexts in which music is heard (Avdeeff, 2012; Ayers, 2006; Taylor, 2001). However, data suggested that factors relating to knowledge development, cost (of specialist technology, streaming services, and new devices), and accessibility may be barriers to technological engagement. Past research has evidenced the impact of factors such as a lack of training and reliance on VI individuals teaching themselves how to use devices on technological engagement (Fuglerud, 2011; Griffin-Shirley et al., 2017). Participants agreed that learning how to use new technology was a

challenge, although as one participant, who completed the survey by phone, pointed out, this challenge did not necessarily impact negatively on their experience of musical engagement.

11.3 Chapter Summary

This chapter has provided an overview of respondents' musical engagement. This has included explorations of the amount of music listening carried out by participants, the importance attributed to music, and the functions fulfilled by music. It has also provided data relating to the potential impact of a VI on participants' engagement with music, and the challenges and benefits that participants associated with technological engagement for music listening.

12 Study 3- Live music event attendance

This chapter explores survey respondents' experiences with live music. Quantitative data relating to frequency of attendance, motivations for attending events, and event accessibility is discussed, alongside qualitative data gathered in open-ended responses which addressed participants' lived experiences at events and their opinions relating to venue accessibility.

12.1 Attendance at live music events and factors influencing attendance

Participants were asked to indicate the frequency with which they attended various cultural and sporting events (see Figure 12.1 for frequencies of attendance). What was most apparent is that the majority of participants reported 'Never' attending most events listed. Plays, classical and pop concerts, musicals, and outdoor music festivals were attended at least 'Sometimes' by the greatest number of participants. It is notable that of these five events, four were musical.

Next, participants were asked to reflect on the factors which influenced their decision to attend live music events. Participants rated the importance of 16 factors relating to organising attendance, the venue, the musical performance, the company with whom they would attend, and event accessibility. As seen in Table 12.1, all factors were considered of some importance, except for attendance with a charitable group or organisation. The availability of a sighted companion and familiarity with the act(s) performing were the most important factors, whilst the availability of seating in a disabled area and size of venue were of low importance.

Participants were also given the opportunity to describe any additional factors which might influence decisions to attend an event. Nineteen open-ended responses were given, and TA identified 13 additional factors, including the importance of sitting at events rather than standing, and the volume of music (see Figure 12.2 for all factors).

Five participants reflected on the interrelated nature of many of these factors. One participant wrote, 'I have anxiety and being in crowds and unfamiliar places sets off my anxiety and the unfamiliarity of a venue worries me'. Here, factors relating to mental health, the crowd environment, and familiarity of a venue are intertwined. Another referred to the relationship between factors already listed.

It's more the interconnections between the above statements e.g. if I'm familiar with a venue I'll go alone, if I've had good experience with staff assistance, these make having a family/friend less important. If the venue is less familiar the importance of a sighted guide increases.

These responses demonstrate the value of open-ended responses in addition to Likert-scale responses, and reflect findings from Study 2, which highlighted relationships between factors such as size of venue and familiarity, and their contribution to the accessibility of events.

Table 12.1: Factors impacting on attendance at live music events, in order of importance.

	N	Mean	Median	Mode	SD
Availability of a sighted companion or family member to attend with	88	3.94	4	5	1.29
Familiarity with the act/-s performing	90	3.93	4	4	1.06
Distance and time to travel to event	91	3.66	4	4	1.27
The musical programme	88	3.65	4	4	1.12
Availability of public transport to event	91	3.6	4	5	1.39
Cost of tickets	92	3.52	4	4	1.20
Ease of access to toilets	88	3.33	3	5	1.45
Cost of travel to event	90	3.32	4	4	1.31
Familiarity of venue	90	3.04	3	4	1.42
Availability of free disabled or carer tickets	91	2.99	3	4	1.39
Comfort of guide dog	45	2.96	3	1	1.75
Number of attendees and crowds	91	2.93	3	1	1.50
Availability of seating which maximises use of residual vision	73	2.92	3	1	1.71
Availability of seating in a disabled area	90	2.79	3	1	1.55
Size of venue	88	2.73	3	1	1.46
Attendance with a charitable group or organisation	82	2.07	1	1	1.21

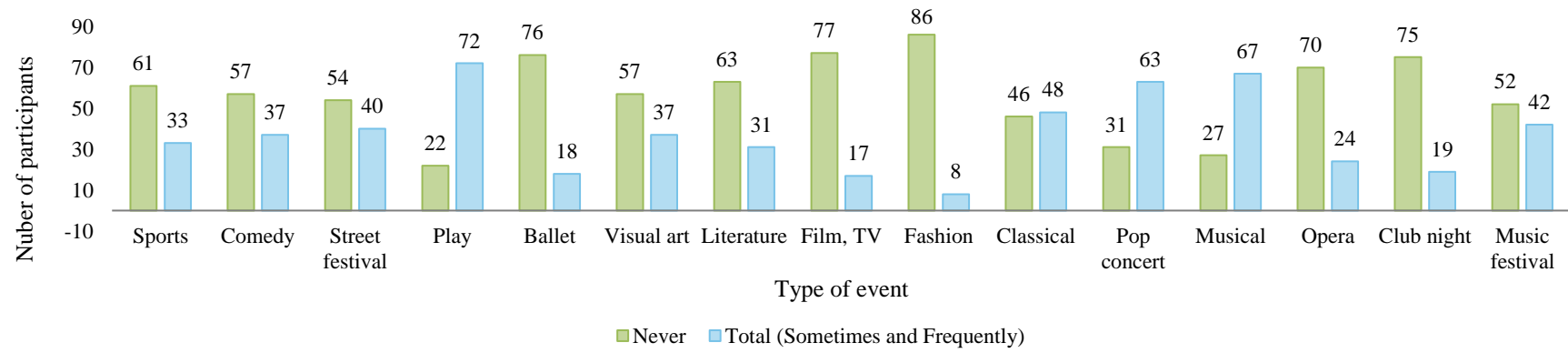


Figure 12.1: Frequency of attendance at cultural events.

Table 12.2: Mean ratings of live music motivation statements, from highest to lowest.

	<i>N</i>	Mean	Median	Mode	<i>SD</i>
Music events offer something additional to listening to music at home	89	4.35	5	5	.87
Attending music events offers a break from the routine of everyday life	89	4.15	4	4 and 5	.97
Live music events are an opportunity to spend quality time with friends or family	90	3.71	4	5	1.25
Musical events are an opportunity to discover new music and artists	90	3.66	4	4	1.15
Live music events are a chance to escape from the worries of everyday life	90	3.56	4	5	1.33
Live music events are an opportunity to expand my musical knowledge	90	3.47	4	4	1.17
Live music events allow me to learn from the performances of others	84	3.25	3	4	1.27
I attend music events to meet like-minded people	87	2.79	3	2 and 3	1.26

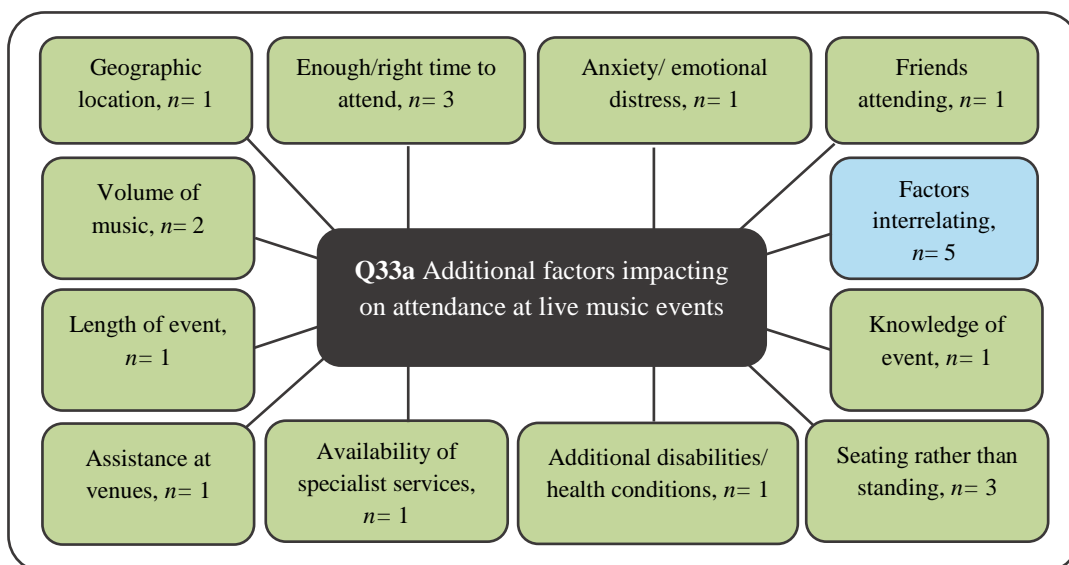


Figure 12.2: Additional factors impacting on attendance at live music events, $n= 19$

Participants were also asked to indicate the extent to which they agreed with eight motivations for attending live events. As seen in Table 12.2, participants agreed to some extent with all eight statements, but agreed most strongly that live events offer something additional to listening at home and provide a break from everyday routine. A high level of agreement was also shown for the statement, ‘Live music events are an opportunity to spend quality time with friends or family’, however the other social statement, ‘I attend music events to meet like-minded people’ received the lowest mean rating. This suggests a difference in the importance of these two social functions, although, the positive correlation found between responses to these statements shows that those who agreed that one of these social functions was important, considered the other to be important ($r= .452, p= <.001$). A similar correlation was found between responses to the two educational statements which addressed the role of live music in expanding musical knowledge, and informing one’s playing ($r= .607, p= <.001$).

12.2 Accessibility and experiences at live music events

Participants rated their agreement with ten statements relating to experiences and potential issues of accessibility associated with live music events (see Table 12.3 for mean ratings of all ten statements). Overall, participants agreed with all but one of the statements listed.

When asked about experiences prior to attending, participants expressed a preference for seeking access information over the phone rather than online. This statement received one of the highest mean ratings. This finding was also supported by open-ended responses. One respondent stated that speaking to someone over the phone ensured that his needs could be discussed, whilst another commented that it was necessary to speak to the venue because ‘the website is a bit of a challenge’.

Table 12.3: Responses to statements addressing experiences and accessibility at live events (highest agreement to lowest agreement).

Accessibility and experience statements	<i>N</i>	Mean	Median	Mode	<i>SD</i>
I miss out on some aspects of a live music event due to my visual impairment	91	4.04	4	5	1.54
It is easier to phone up a venue to find out about accessibility than to search for information online	83	3.98	4	4	1.02
Low lighting makes navigation at live music event venues more difficult	72	3.76	4	5	1.51
I feel more comfortable at smaller venues than larger venues, e.g. arenas or festivals	89	3.74	4	4	1.19
I worry about not being able to find toilets at live music events	89	3.70	4	5	1.30
The volume of sound at concerts can feel like ‘sensory overload’	90	3.58	4	5	1.42
Staff at live music events understand my accessibility requirements	85	3.00	3	4	1.20
A change in my visual impairment has impacted on my attendance at live music events	68	2.91	3	1	1.53
I find the process of purchasing tickets for music events easy	85	2.78	3	2	1.29
I find it easy to navigate at live music events	87	1.94	2	1	1.02

The 85 responses to the statement ‘I find the process of purchasing tickets for music events easy’, were mixed, with a greater number disagreeing (47.1%, $n= 40$) than agreeing (35.3%, $n= 30$), and a further 15 neither agreeing nor disagreeing (17.6%).

Addressing accessibility, ‘I find it easy to navigate at live music events’ received the lowest mean rating of all eight statements, indicating that navigation was a significant challenge. The agreement amongst the current sample that smaller venues are more comfortable than larger venues also reflects this; many associated large venues with greater navigational difficulties (discussed further in Section 12.3.2 in the current chapter). Participants agreed that low lighting made navigation more difficult, and that finding toilets was a source of apprehension. Open-ended responses reflected concerns regarding lighting, with one participant commenting, ‘due to low level lighting... I worry about bumping into people’.

Participants agreed that volumes of sound at live events can feel like ‘sensory overload’ and that they miss out on some aspects of a live music event due to their VI; the latter statement received the highest mean rating overall. There was also agreement that a change in vision had impacted on attendance at events, although the number who responded to this statement ($n= 68$) was greater than the number who reported a late-onset VI or changes to their vision during their life ($n= 41$). This could indicate a selection of a neutral response (or disagreement) where selection of ‘N/A’ might have been more appropriate.

12.2.1 Use of specialist services

Next, participants were asked to reflect on their use of specialist services at live music events. Participants reported the frequency with which they used four specialist services at music events: Audio description (AD), Touch tours (TT), Braille copies of written materials, and Digital downloads of written materials (see Figure 12.3 for overview of responses).

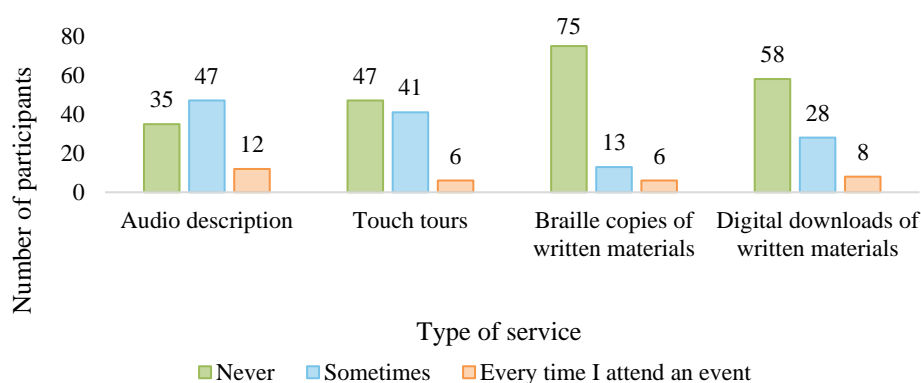


Figure 12.3: Frequency of participants’ use of specialist services at live music events.

The most frequently used service was AD, with 50% of respondents using this service sometimes, and a further 13% using it every time they attended an event. Use of TT was also quite frequent, with 50% of respondents using this service at least sometimes. As highlighted in

the interview study, these services may not be appropriate for all types of event (see discussion in Chapter 9, Section 9.4.5), which may have contributed to the low number using these services every time they attended an event.

Whilst 43% of respondents read literary Braille, only 20.21% ($n= 19$) reported using Braille copies of written materials. A few more accessed materials via digital downloads (39% used this service at least sometimes), but the majority had never accessed materials in either one of these formats.

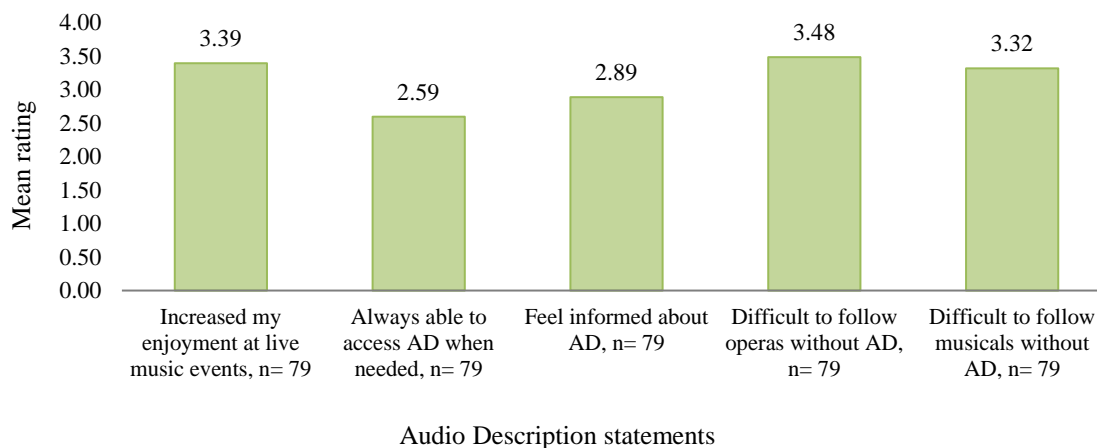


Figure 12.4: Mean ratings of statements relating to the impact and availability of AD.

The impact of these services was also considered. Participants rated their agreement with nine statements regarding the impact of AD and TT, and the accessibility of written materials (WM). As seen in Figure 12.4, participants agreed that overall, AD had increased their enjoyment of live events. It is perhaps surprising that agreement was not higher, given the overall agreement that AD helped participants follow the storylines of both operas and musicals. Once again, this may suggest variability in the appropriateness of AD for different types of event. In contrast, mean ratings suggested that respondents did not always feel able to access AD, with the majority disagreeing to some extent with this statement ($n= 51$). Overall, participants expressed a low level of agreement that they felt informed about the availability of AD; almost the same number disagreed ($n= 22$) as agreed ($n= 24$) to some extent. Whilst the benefits of AD were recognised by many, access and information relating to AD was inadequate for some.

As seen in Figure 12.5, participants agreed that TT had increased their enjoyment of live music, but as with AD, they agreed less strongly with the statement which addressed feeling informed about TT (41% of respondents, $n= 32$, disagreed to some extent with this statement). The statement, ‘I am always offered written materials relating to a live performance in an accessible form’ received the lowest mean rating of all eight statements, but respondents agreed most strongly with the statement ‘I find it helpful to receive written materials relating to a live

performance prior to my attendance’. Whilst access to WM in an accessible format contributes greatly to the accessibility of events for VI attendees, this service is rarely offered.

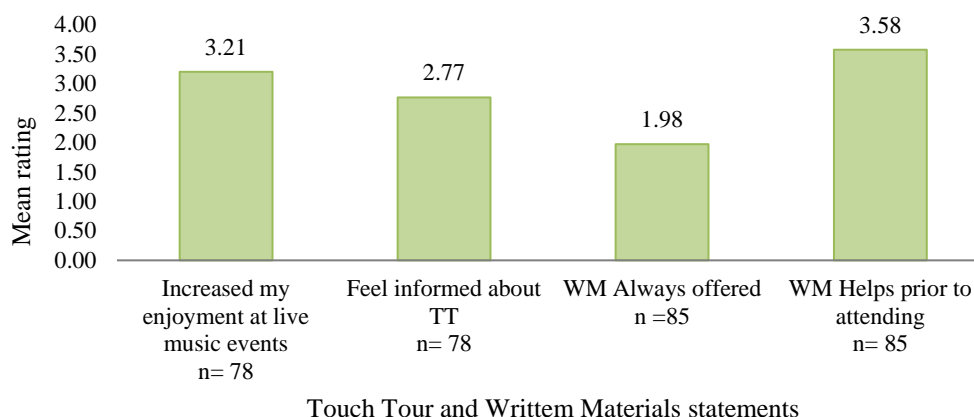


Figure 12.5: Mean ratings of statements relating to the impact and availability of TT and WM in alternative formats.

12.2.2 Additional disabilities and the accessibility of live music events

Given the impact of additional disability and health conditions on musical engagement in Study 1 and 2, it was important to consider whether an additional disability impacted on experiences at live events. There were no significant differences found between the responses to the above ten statements for those who did or did not have an additional disability, although those with additional disabilities tended to give lower mean ratings to statements relating to positive experiences, and higher ratings to statements relating to negative experience (see Table 12.4 for comparison of means).

Further comparisons were made to consider the impact of different types of disability. The responses of participants who had hearing loss (or auditory processing disorder), a physical impairment, and multiple and/or complex chronic conditions were considered (mental health was excluded from this comparison as only two of the five respondents who had a mental health condition rated their agreement with these statements). The Mann–Whitney U test was used as data were not normally distributed. No significant differences were found between those who did or did not have hearing loss. However, those who reported having a physical impairment rated the statement ‘I feel more comfortable at smaller venues than larger venues, e.g. arenas or festivals’ significantly higher ($n= 19$, $Mdn= 5$) than those who did not report a physical impairment ($n= 70$, $Mdn= 4$), $U= 353.5$, $p= .001$. The presence of complex health conditions was also found to impact on the importance of size of venue; those with a complex health condition ($n= 9$, $Mdn= 5$) rated the above statement significantly higher, than those without a complex health condition ($n= 80$, $Mdn= 4$), $U= 196$, $p= .020$. These findings suggest that size of venue may be an even greater consideration for those who have an additional physical impairment or complex health condition. Open-ended responses suggest that a

preference for smaller venues may relate to a perception of better accessibility and support. As one respondent with a physical disability commented, ‘Smaller venues tend to be more accommodating’, and another, ‘Small venues are more accessible’. A significant difference ($U=153.5, p=.038$) was also found in ratings of the statement ‘A change in my visual impairment has impacted on my attendance at live music events’ for those who did ($n=9, Mdn=4$) and did not ($n=59, Mdn=3$) have a complex health condition. This suggests that for these individuals, the impacts of VI on engagement with live music may be felt even more acutely.

Table 12.4: Comparison of means ratings of ten statements relating to live music event accessibility and experiences for respondents with and without an additional disability.

Statement	Additional disability	<i>N</i>	<i>M</i>	<i>SD</i>
1 I find the process of purchasing tickets for music events easy	Yes	30	2.50	1.23
	No	55	2.93	1.32
2 It is easier to phone up a venue to find out about accessibility than to search for information online	Yes	29	4.17	.81
	No	54	3.87	1.12
I find it easy to navigate at live music events	Yes	31	2.06	1.03
	No	56	1.88	1.01
Low lighting makes navigation at live music event venues more difficult	Yes	27	4.15	1.29
	No	45	3.53	1.59
I feel more comfortable at smaller venues than larger venues, e.g. arenas or festivals	Yes	33	4.06	1.12
	No	56	3.55	1.21
I worry about not being able to find toilets at live music events	Yes	33	3.85	1.15
	No	56	3.61	1.38
Staff at live music events understand my accessibility requirements	Yes	29	2.86	1.22
	No	56	3.07	1.19
The volume of sound at concerts can feel like ‘sensory overload’	Yes	33	3.76	1.58
	No	57	3.47	1.32
I miss out on some aspects of a live music event due to my visual impairment	Yes	33	3.91	1.31
	No	58	4.12	1.06
A change in my visual impairment has impacted on my attendance at live music events	Yes	28	3.21	1.45
	No	40	2.70	1.57

12.3 Live music events: Open-ended responses

The sections that follow discuss themes identified in the open-ended responses gathered in the final section of the survey (see Figure 10.1 in Chapter 10 for survey map). Responses to questions 40 to 42 were analysed thematically to identify salient themes relating to participants’ most recent live music experiences, and opinions relating to event accessibility.

12.3.1 Participants' most recent live music experiences

Responses to Question 40 varied in detail; some provided only factual details about their most recent live music experience (e.g. date or name of performer), whilst others listed the positive or negative aspects of the experience. A small number ($n=4$) responded 'N/A'. TA identified 12 main themes, relating to experiences before, during and after attendance (see Table 12.5). Examples of comments relating to positive and negative experiences, and occasions where barriers were overcome are provided in Appendix P (note, some themes received only positive or negative comments, e.g. familiarity of venue only impacted positively on participants' experiences). As seen in Table 12.5, participants reflected on several of the challenges already discussed, including purchasing tickets, the availability and use of disabled/companion tickets, navigating inside and outside venues, lighting, crowds, and experiences with staff.

Table 12.5: Themes and subthemes identified in responses to Question 40.

1 'Missing out' on visual aspects	8 Music/performer
2 Frequency of attendance/familiarity of venue	9 Overall experience
3 Tickets	Enjoyment despite challenges
Access to disabled/carer tickets	10 Disabled facilities
Others purchasing tickets on their behalf	Appropriateness of facilities depending on event
Ticket agencies	11 Accessibility
Online bookings	Seating
Phone bookings	Travel and transport
4 Physical environment and navigation	Written materials
Size of venue	Sighted companion or attending alone
Navigating outside the venue	Specialist services (e.g. Audio Description)
Crowds	Guide Dogs
Finding toilets (non-disabled)	Information
5 Lighting	12 Other factors/concerns
Changing light outdoors (sunset)	Psychological factors (e.g. anxiety)
6 Sound volume	Bag/body searches
7 Staff	

Once again, the value of attending events with a sighted companion was evident; this provided access to visual descriptions, ease of movement, and confidence. Two responses highlighted the importance of staff allowing attendees to feel independent. One participant, who had attended an event alone, appreciated that staff had provided support and then 'left me to it', and another commented, 'the staff are great, they are very helpful without being patronising'.

The theme ‘Accessibility’ contained seven subthemes, all of which reflected earlier discussions, such as challenges and benefits associated with seating, travel, accessibility of written materials, and the use of specialist services. One respondent commented that access to written materials was achieved not through provision from the venue, but by the presence of a sighted companion; overcoming this barrier was the responsibility of the individual. This reflected findings from Study 2, whereby participants were required to seek support from others when accessing information about events (see Chapter 9, Section 9.4.1), and disagreement with the statement, ‘I am always offered written materials relating to a live performance in an accessible form’ in the current study. Findings suggest that written materials are not typically provided in alternative formats. Participants also reported negative experiences of attending events with Guide Dogs, including staff ignorance, and for one participant, difficulty finding space inside a venue, ‘Eventually they moved out a seat so there was enough space... staff were okay in the end but I did have to fight to get something done.’ Comments suggested a lack of knowledge regarding Guide Dogs and the provision of ‘reasonable adjustments’ to support VI attendees (Assistance Dogs UK, 2015). The concept of ‘fighting’ to overcome this barrier reflects the findings of Attitude is Everything (2018), who highlight the importance of disabled attendees being aware of their legal rights and demanding the support which is entitled to them.

12.3.2 Impact of size and type of venue on accessibility

Figures 12.6 and 12.7 provide an overview of themes regarding the impact of size and type of venue on accessibility (see Appendix Q for full list of themes identified in open-ended responses). Responses on this topic were mixed, with some considering large, and others perceiving small, venues to be more accessible. The only benefit of larger venues which received multiple mentions was the perception of greater staff training and support. However, staff support was also cited as a benefit of smaller venues, along with easier navigation and the possibility of attending events alone; one participant commented that it is, ‘much easier to navigate and be independent in a small venue’. Larger venues were associated with a greater number of disadvantages than smaller venues; these included difficulties navigating the physical environment (e.g. furniture or steps), and limitations on access provisions such as seating and information. The fact that similar benefits and disadvantages were cited for both types of venue, and that some considered all venues to offer similar levels of accessibility, suggests that multiple factors, in addition to size of venue, impact on accessibility.

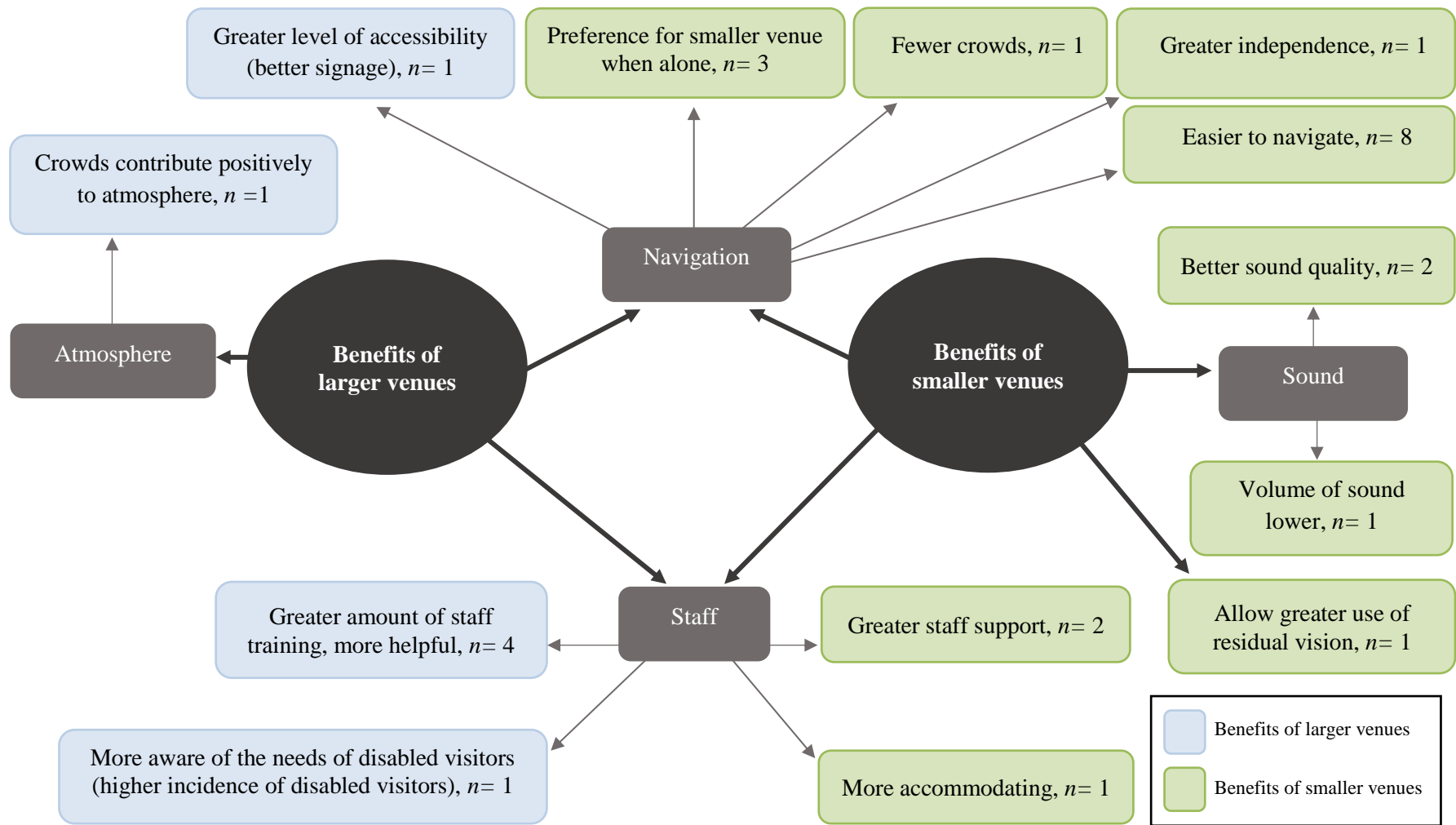


Figure 12.6: Thematic map of the benefits of larger/smaller venues.

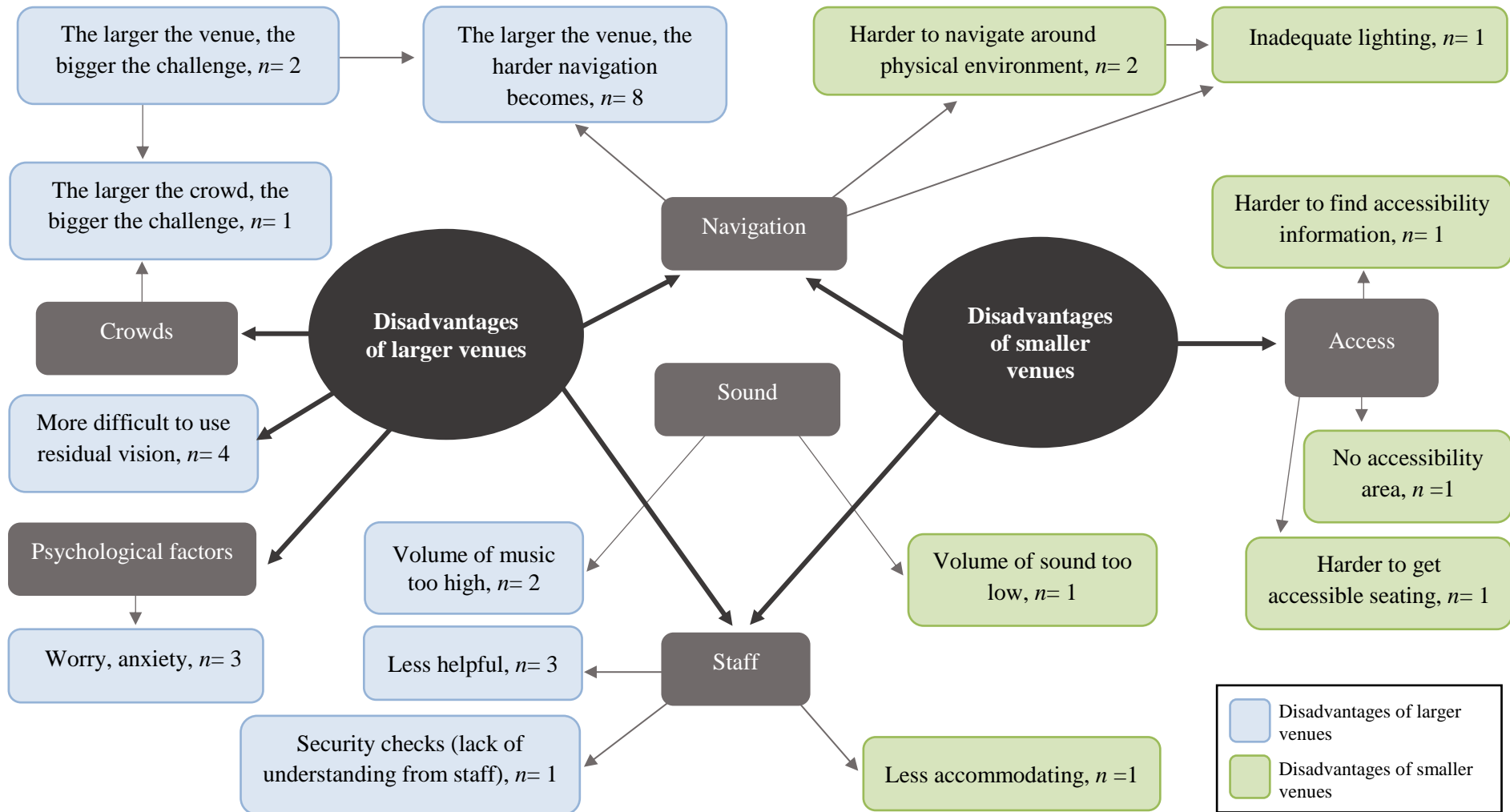


Figure 12.7: Thematic map of the disadvantages of larger/smaller venues.

One participant, for example, reflected on the disadvantages of three different types of venue, ‘If a concert venue is echoey, it can be hard to hear. If it is too small, it can be too loud. If it is an open-air venue, sometimes seats aren’t available.’ For this individual, different types of venue came with their own set of potential issues, some of which related to accessibility, and some of which reflected the quality of the experience. Another participant reported no perceived differences between venues, ‘As for access they are all pretty much the same’.

12.3.3 Suggested improvements to accessibility

The final question in the survey asked participants how event accessibility might be improved. Almost all participants offered one or more suggestions. Three gave a response of ‘N/A’ (these individuals also answered N/A to the other open-ended questions) and two responded that they felt unable to answer; the first always attended with a partner, and the other did not attend events due to feelings of anxiety. This, in itself, suggests the need to improve accessibility. TA identified six areas where participants felt improvements could be made: ‘Information’, ‘Outside the venue’, ‘Inside the venue’, ‘VI Services’, ‘Staff’, and ‘Tickets’. They also commented more generally on the current state of accessibility (see Table 12.6 for themes and subthemes). The following discussion outlines these suggested changes and relates these to quantitative findings from the current study, and literature which addresses event accessibility.

Information

A frequent observation was the current inadequacy of access information. Several commented that access information, and guidance on how to book access, should be made more apparent. As one participant noted, having this information ‘out there’ may encourage new audience members who have a VI, ‘They could make their willingness to help more known, as some people with visual impairment may feel put off going to live music events because they may feel that it will be inaccessible where in fact this is not true’. Several participants reported challenges when accessing information online, relating to both a lack of access information, and the inaccessibility of information due to poorly formatted webpages. ‘More prominent links to accessibility information on websites’ were requested, and one participant requested ‘Better advertising for AD and TT. I have to ring up for this information because the website is a bit of a challenge’. One individual commented that seeking information by phone could be a lengthy process if phone lines were busy, reflecting similar concerns of participants in the interview study. Ensuring that attendees have access to information online would reduce the time needed to seek information and give individuals the opportunity to carry out independent research online. This could also benefit the venues itself by reducing phone traffic and providing a comprehensive source of information to which staff members can refer.

Table 12.6: Themes relating to suggestions for improving accessibility of events for VI attendees.

1 Information	5 Staff
Signposting to information from ticket agents	Better staff training for working with VI attendees
Buddy systems	Communication with VI attendees
Information available beforehand	Greater concern for Guide Dogs
Better quality information about services	Improvements to staff attitude
Information on websites (e.g. booking access)	More attentive staff
2 Outside the venue	Sighted guide
Accessible parking	Help to find toilets
Dedicated entrance	6 Tickets
Assistance getting to venues	Phone bookings (e.g. dedicated phone line)
Lack of confidence travelling to and from events	Ask attendees about requirements at time of booking/prior to arrival/on arrival
3 Inside the venue	Free carer or disabled tickets
Steps and stairs	Concessions for VI attendees
Reduce sound volume at events	Reduce cost
Headphones to reduce sound volume	7 Toilets
Better lighting	Bright lighting in toilets
Clearer walkways	Upkeep of toilets
Better signage	8 Current accessibility and services
Service desk near to entrance	Accessibility acceptable as it is
Easier access facilities	Deliver on services and support promised
4 Services for VI attendees	Funding is a barrier to improvements
Announce items verbally	Recognises attendee's varying needs
Preferential treatment	Need for standard requirements across venues
Screens to show details of stage	
Written materials in alternative format	
Audio Description and Touch Tours (e.g. better publicity, better quality, more availability)	
Seating (e.g. don't seat VI attendees in disabled area, early access to seating, specified VI seating, AV linking)	

There were two other areas where information was considered inadequate. Firstly, one participant commented on second party ticket sales, 'if you have to buy tickets from an agency, the agency should have to link to such details [accessibility services]'. Progress to improve the availability of access information and ease of access to services has been made (the STAR Accessible Ticketing Working Party, a coalition of organisations, is working to create online ticketing schemes which allow access facilities to be booked more effectively, STAR, 2018) but it appears that individuals may still face challenges, particular when using second party sellers. Secondly, two participants suggested that information about buddy schemes would be beneficial, 'Volunteer buddies who could enable me to attend on my own'. This suggestion

reflected the comments of many participants, who felt that attending events alone was not viable. One participant had used a volunteer scheme to attend non-musical events and suggested that a similar scheme would encourage attendance at musical events.

My biggest problem is finding somebody to go with because there is no way I can get to the events without somebody taking me... I would go to many more band concerts and classical concerts if I knew more people local to me who would come and help sighted guide me.

Some existing services do offer means of finding a buddy with whom to attend music events. The 'Meetup' application (<https://www.meetup.com>) was used by Study 2 participant, John, but he observed that the events organised through the app are not always well-suited to VI users. 'Concert Buddies' offer a similar service for music events, although information addressing the needs of disabled users is not provided on their webpage (Concert Buddies, 2019).

Whilst a small number of buddy schemes exist for live music events, awareness and use of these services amongst VI attendees may be limited. Furthermore, the responsibility of providing this type of service may not fall within the remit, nor budget, of a music venue; existing services tend to be independent organisations and charities. Promotion of existing services, including free companion tickets schemes, may be an important step towards increasing awareness of the options available to individuals who have a VI, and this may be a task to which venues, event organisers and sight loss charities can all contribute.

Finally, as highlighted previously, written materials in alternative formats were often not available. Open-ended responses suggested that providing materials in Braille or in a digital format prior to events would be useful. Given that digital versions of materials could be easily produced, it is surprising that this service had not become more common. For venues who do not currently offer a digital version of materials, this could be a simple means of increasing the inclusivity of events and improving access to information about live events.

Outside the venue

A few participants highlighted challenges which could arise before arrival at a venue. One commented that 'Handicapped parking close to venue is also helpful.' This respondent had rheumatoid arthritis, which caused additional mobility difficulties. Another respondent reported a lack of confidence when travelling to and from events using taxis, 'I fear if I go to an event and then need a taxi to go home, that the taxi driver will not spot me waiting'; whilst not proposing any means of overcoming this barrier, this does demonstrate, once again, the importance of attending with sighted companions for many VI attendees.

Addressing arrival at a venue, two participants suggested an alternative entrance for attendees who have VI; one proposed 'A dedicated space/entry' and the other suggested that venues 'let

disabled people on ground level for easy access'. Whilst dedicated entrances may not be a plausible solution (this may require space and staff beyond the resources available), greater awareness of the challenges faced in this context may serve to improve the protocols in place to support VI attendees. A greater staff presence outside venues may be useful, for example, and clear instructions for what attendees need to do on arrival, could be beneficial.

Inside the venue

One of the most common causes of difficulties when navigating inside venues was inadequate lighting. Some felt that general levels of lighting needed to be improved, 'turn the lights up', whilst others commented that more lighting was needed in specific areas, 'Clear lighting to and from seats down aisles etc.' and 'Put lighting on the ground so visual impaired can get up and go'. Inadequate building maintenance was also found to contribute to this problem. As one participant commented, venues should 'Make sure lights work'. Also on the topic of maintenance, this participant wrote, 'Keep regular maintenance up as broken things like locks on toilets cause extra challenges'. As these comments highlight, regardless of the reported accessibility of a building, poor maintenance may give rise to unexpected challenges. This finding clearly reflects those of Attitude is Everything (2016) who suggest that 'An accessible toilet is only an accessible toilet if its size, fixtures and fittings are fit for purpose' (p. 22).

Several participants commented that better signage inside venues would be useful in making seating, services and exits more apparent, 'BIG signs for toilets etc.' and 'Clearer signage in the venue for finding seating, toilets, exits, etc.'. There were also those who suggested that accessibility of facilities could be improved. One participant suggested that venues should 'Have a customer service desk right by the entrance... not 100m inside the venue'. An easily accessible service desk would reduce time spent locating assistance or information. In contrast, two respondents sought a system for ordering drinks which avoided the difficulties of communicating at a crowded bar. Whilst altering the location of toilets and service desks may be a difficult feat, pre-ordering of drinks is available at some events and could offer a solution to this challenge. The comments of one participant, 'I have gone without a drink for fear of finding my way to the bar', highlight the importance of addressing these challenges in order to ensure that all attendees feel able to safely move around spaces at live music events.

Services for VI attendees

There were several suggestions relating to services for VI attendees. Two participants proposed the use of screens to assist those using residual vision. It is unclear how feasible this would be in smaller venues, although the use of screens at larger events is well-established. In cases where screens are not a viable option, ensuring that seats are available close to the stage could achieve a similar goal. In fact, many participants reflected on the importance of accessible

seating, including the proposal of a designated seating area for VI attendees near to the stage to maximise the use of residual vision. Reflecting the benefits of disabled areas highlighted in Study 2, participants believed designated areas for VI attendees would offer a safe area away from crowds and easier access to toilets, although some emphasised that these areas should not feel disconnected from the performance, ‘Have an accessible area with easy access to toilets - but not cut off/without atmosphere’ and ‘Having designated areas for sight impaired people to go where they don't feel they have been put in a special ghetto place!’.

Access to seating before other audience members was suggested as a possible solution to managing crowds inside a venue. Exploration of online access information for several venues (including Manchester Arena, Leeds Grand Theatre, and Liverpool Philharmonic) suggests that early access to seats is not typically advertised, but Blog posts from one regular VI concert attendee show that this service is often offered (Life of a Blind Girl, 2017, 2018).

One of the most common suggestions relating to services for VI attendees was increased availability of AD, once again suggesting that current supply does not meet current demand. Increased availability of these services would be ideal, allowing VI attendees freedom to attend events at times most suitable to them. As one participant commented, ‘Offer audio description on popular nights - such as weekends {and not just Mondays} for story-lead musicals’. However, this solution may require greater funding and infrastructure than is available; AD is typically provided by touring organisations such as VocalEyes (VocalEyes, 2016). Alternating the schedule of AD services, where multiple AD performances are offered, could alleviate this issue, but until greater financial support is provided to increase provision, this may be a difficult barrier to overcome. As suggested by interview participants, increasing publicity of existing AD services may also be valuable.

Finally, one respondent commented on difficulties experienced in relation to attending events with a Guide Dog and suggested the need for venues to mind Guide Dogs during performances.

There are some venues that make it difficult when we want to bring our dogs because not all venues have the service where the dog will be cared for when you are in a performance. Loud music performances are not ideal for the dog and the welfare of the dog must be considered above all else... Without my dog, I'd not be able to get to the venue, so having this type of service is important to me.

Whilst venues are legally required to make ‘reasonable adjustments’ to provide access to events for VI individuals, including allowing Guide Dogs to accompany them, providing a dog minder may fall outside the bracket of reasonable adjustment (Assistance Dogs, 2015). This service is advertised on the websites of some (e.g. Leeds First Direct Arena and SSE Arena Wembley) but not all venues. It would be useful if all venues stated whether or not this service is provided.

Staff

Suggestions for improvements to staff training and attentiveness were common; this included staff needing to be more understanding, and improvements in communication. Addressing this, participants highlighted the importance of adequate disability training, ‘Very important is staff that have disability awareness training so they can meet the needs of people visiting these places’. Some referred to the specific needs of attendees with a VI, ‘All staff could be much better trained to be more proactive in assisting visually impaired concert goers’ and ‘Have Visual Impairment Awareness Training’. As one respondent illustrated, better staff training could contribute positively to the experience of attending events, ‘If all staff were trained, then it would be great, because whichever entrance/door you arrived at, someone would be there to help you, who understands your specific individual needs’. These comments support the suggestion of Attitude is Everything (2016), that there may be a lack of confidence of venue staff when interacting with people who identify as Deaf or disabled, and that Disability Awareness Training is essential in ensuring high quality customer service.

Some participants suggested that staff support should be available for the duration of a performance. In contrast, others specified particular tasks for which they required support (e.g. moving to and from the toilets). The variability in these suggestions highlights the importance of establishing the level of support that an individual requires from the outset and recognising that not all VI attendees will need the same type of assistance.

Similar to suggestions of a buddy scheme, a frequent suggestion was a dedicated member of staff or volunteer to act as a sighted guide. Benefits associated with ease of navigation were cited, ‘Have someone on hand to help them navigate to and from their seats’. One participant suggested that guides might be allocated to groups of attendees, ‘Maybe a guide for each row’, whilst others suggested that a guide should be provided on a one-to-one basis. As with buddy schemes, the provision of sighted guides may fall outside the responsibilities of venues. Questions of who would fulfil this role (existing or new staff members, or volunteers), where funding would be sourced, and issues of safeguarding and timetabling are all important considerations. Charitable organisations may be a useful point of contact for those seeking sighted support at events, although the extent to which sighted guides would be able to provide the level of assistance proposed by respondents is unclear. Given that companion ticket schemes exist to enable attendees to take someone with them to act as a sighted companion, it is unlikely that provision of sighted guides is a service which could be offered by venues. Clear information regarding companion ticket schemes may be most beneficial.

Tickets

A small number of respondents commented on potential means of improving the process of booking tickets. The most frequent comment was that it would be useful if venues asked

participants about specific access requirements as a matter of course, at the time of booking.

Staff are getting better at promoting accessibility for disabled people, but you have to ask them to do so. At the booking stage, there should be a tick box to say you're disabled and require extra assistance/accessible movement throughout the venue.

In the booking process, there should be more attention paid to what each individual requires regarding support from staff.

Attitude is Everything (2018) suggest that access booking should be available as soon as tickets go live; this may be best way of ensuring that the needs of those with access requirements are met. There were also those for whom access to companion tickets or 'accessible' tickets was viewed as inadequate. One participant commented that venues should, 'Allow a carer to attend with you at a discount or free'. This, for many venues, is a well-established policy. However, two participants suggested that the availability of these tickets was a barrier, 'More tickets reserved for disabled + carer' and 'More accessible seating and tickets'. Attitude is Everything (2018) make an important observation on this topic. Firstly, venues and events have set capacities of accessible seating; these spaces can often sell out, which is an issue in and of itself. However, if websites which have sold out of tickets for Accessible Seating state that 'Accessible Tickets' have sold out, this gives the impression that there are no tickets available to those who simply require a companion ticket. This should not be the case; these tickets (which can be bought for any location at a venue) should remain available to those who need them. Attitude is Everything (2018) suggest that the use of different terminology ('carer ticket', 'personal assistant ticket', 'companion tickets') may further confuse attendees. As such, venues must ensure that patrons are aware of the ticket options available to them and publicise the availability of free companion tickets for attendees who may need support at events.

12.4 Discussion

In the current study, musical events were amongst the most frequently attended cultural events. Factors relating to the music being performed, such as familiarity with the act performing or the musical programme, and practical factors such as navigational challenges, distance to travel, and the availability of transport, all impacted on attendance at live events. As with Study 2, one of the most important factors impacting on attendance, highlighted in both quantitative and qualitative data, was having a sighted companion with whom to attend. This allowed participants to circumvent difficulties associated with navigation and feel more confident. However, some participants reflected on the potential challenge of booking free companion tickets and a perceived lack of availability of these tickets. Attitude is Everything (2018) highlight the importance of making these tickets more easily bookable through access schemes and online booking systems, and making clear distinctions between companion tickets and tickets for specified disabled seating.

The presence of additional disabilities was also found to impact on the accessibility of events. The associations found between the presence of a physical disability or multiple/complex health conditions and additional challenges at live music events were summarised by one participant, who observed that the sound and light at live events could trigger their epilepsy, migraine and other health-related conditions. VI would be just one contributing factor to this individual's experience. Additional disabilities may compound the challenges associated with live event attendance for those with a VI, just as VI may compound challenges that sighted attendees also encounter (e.g. loud volumes of music and managing personal space).

In terms of accessibility of events, participants were positive about their experiences of AD and TT but called for increased availability and greater promotion of existing services. The availability of written materials in an accessible format was also limited. There are occasions where written materials may contribute greatly to the enjoyment of a performance. Programmes, for example, may provide information about the performer, the music, translations, or plot line. Without access to this information, understanding may be hindered. There were also those who believed that their access requirements were not understood by staff at venues. The variety of needs and preferences reported by participants highlights the importance of establishing how best to support attendees who have a VI at time of ticket purchase; a 'one-size-fits-all' approach to accessibility is clearly not adequate.

Finally, the fact that so many participants reported similar challenges indicates two things. Firstly, that improving accessibility is not an impossible task. Small improvements to a few key areas could make a large difference to VI attendees' experiences of booking and attendance. Secondly, and as one respondent pointed out, at the centre of this discussion is the wider issue of standardised protocols and procedures across all venues, 'I think it's a case of having certain standards that all venues should reach in order to cater for everyone's needs'. As Attitude is Everything highlight (2018), the live music industry needs to collectively agree a baseline set of standards when it comes to the provision of access, including the establishment of standardised systems for booking access.

12.5 Chapter summary

This chapter has explored data from the third study of the project relating to live music event attendance. The discussion highlighted several key findings relating to motivations and experiences of event attendance and accessibility. Quantitative data provided an overview of participants' engagement with live music, and open-ended responses provided a valuable tool for exploring factors which were considered most important, and gave individuals an opportunity to express their views regarding how accessibility of events might be improved for VI attendees.

13 General discussion and conclusions

This chapter reviews the thesis as a whole, including a summary of key findings and how these relate to existing literature and the research aims. An evaluation of the approach and methods employed is provided, followed by a discussion of the implications of findings and consideration of their real-world application.

13.1 Overview of the current thesis

This thesis has explored the everyday musical lives of individuals who have a VI. The project has gathered data through three studies and is the first to address the wide-ranging experiences associated with everyday musical engagement for VI participants of different ages and with a variety of musical backgrounds. As such, this project offers alternative and complementary perspectives to existing research which has focussed on the experiences of VI musicians (Baker & Green, 2017) and explored the musical engagement of VI individuals through quantitative methods alone (Park et al., 2015). Findings from all three studies offer insight into the role that music fulfils in the lives of individuals who have a VI and demonstrate the range of musical experiences relevant to their lives, and the impact of various factors, including those associated with their VI, on their musical engagement. The summary below provides an overview of these findings and relates these to the research aims and questions set out in Chapter 3 (Section 3.1).

13.2 Summary of findings

13.2.1 Exploring the musical lives of individuals who have a visual impairment.

The first aim of the thesis was to explore the musical lives of adults and adolescents who have a VI, which included a consideration of the functions fulfilled by music, and experiences of engaging with music through both listening and active musical participation. This thesis has highlighted several key findings relating to this aim. Firstly, regardless of musical training, music played an important role in the lives of many participants, contributing to a body of literature which has consistently documented the important role that music plays in the lives of individuals today (Bonneville-Roussy et al., 2013; DeNora, 2000; Rentfrow & Gosling, 2003). The importance of music was not only evidenced by participants' reflections on this topic, but by the range of musical activities undertaken, and the variety of musical functions identified in all three studies. Many of these functions reflected those reported in existing research, such as the emotional, social and cognitive functions of music (Schäfer et al., 2013), but several appeared to be unique to the needs and goals of individuals with a VI. For example, participants highlighted the value of music, and sound more generally, in understanding their surrounding environment, in lieu of visual information. This finding is reminiscent of Baker and Green's (2017) research, which found that that VI musicians considered music to be 'a leveller' with

other students, as well as an activity that was more accessible to them than other activities (p. 26). Indeed, Jacko et al. (2010) describe the success of many VI individuals as musical performers and suggest that technological developments have made the field of music production accessible to VI individuals. It is perhaps notable that 25% of survey respondents in the current study (N= 94) had worked in a musical field, although, the self-selecting sample may mean that this group were more likely to be musically engaged.

Participants in all three studies spoke about their past and current experiences of music-making. Many reported an early interest in music as a child, although beliefs regarding their musical ability at this time were mixed. Findings provide new insight into the importance of music to the lives of children who have a VI, which has typically been viewed as greater for those with a VI than without a VI (Ockleford & Matawa, 2009; Pring & Ockleford, 2005), and the difficulties that some associated with musical learning at this time. Those currently engaged in music-making were involved in a range of activities, including learning and practising instruments, performing (both as amateur and professional musicians), ensemble playing or singing, and sound production. Baker and Green (2017) reflected on a similarly diverse range of musical activities amongst VI musicians. However, several focus group and interview participants in the current study reflected on a lack, or loss, of active musical participation. Practical factors previously identified as impacting on music-making, such as family life, time restraints, and access to instruments impacted on this aspect of their musical engagement (Pitts et al., 2015), in addition to those which were associated with having a VI.

This thesis has provided new knowledge about how people with a VI engage with technology for music listening. Perhaps unsurprisingly, younger participants reported a greater engagement with new types of listening technologies, such as smart, portable devices. Older participants typically used more established devices, including radio and CD players, but attitudes towards technology amongst adult participants was variable. There were those who sought out new technologies or were hopeful of increasing technological engagement, whilst others were unsure of their technological abilities, or expressed a disinterest towards technology. The general trend of higher levels of technological ability and openness in younger generations, and lower levels of technological ability and interest in older adults, held true in the context of music listening (Age UK, 2009; Broady et al., 2010).

Participants also provided insight into the variety of positive experiences, and the various challenges, associated with live music event attendance. Survey respondents agreed that live music events offered something different to listening at home, a break from routine, and opportunities to spend time with loved ones. Similar functions have been identified in previous research, including those relating to meeting like-minded others, enriching relationships, breaking from routine and everyday expectations, and having new musical experiences

(Burland & Pitts, 2012; Packer & Ballantyne, 2010). Whilst research suggests that individuals with a VI attend arts and cultural events less than those who have no VI (McManus & Lord, 2012), attendance at live music events was high amongst survey respondents and they attended musical events more than other type of sports or cultural event. This could indicate that music events were perceived to be more accessible than other events, or as suggested above, may reflect a high level of music interest in this self-selected sample.

Factors such as cost, availability of transport, and knowledge of the musical performance were found to impact on attendance at events, reflecting those practical and musical factors identified as impacting on engagement with live music in previous research (Bowen & Daniels, 2005; Brown & Knox, 2017; Dikmen & Bozdağlar, 2013). However, it was also apparent that functional limitations associated with having a VI impacted on attendance, reflecting literature which has documented the barriers to attending live events for individuals who have a disability (Attitude is Everything, 2016, 2018; Charlton et al., 2010; Culture Republic, 2017).

13.2.2 The impact of visual impairment on access to music and musical experiences

The second aim of the thesis was to consider the impact that a VI may have on access to music and musical experiences. Findings showed that a VI may impact on musical experiences in a number of ways. Firstly it was apparent that engaging with new technologies had increased access to music and reduced the impact of barriers which had been experienced by participants in the past. For example, easier access to the internet had removed the difficulty associated with accessing written information on musical recordings. Participants commented on the benefit of the increased availability of built-in accessibility features on mainstream devices, reflecting the continued progress towards universal technological design and inclusivity in mainstream technology that has been well-documented in the literature (Henry, Abou-Zahra, Brewer, 2016; Stow, 2015). Survey data confirmed that mainstream devices are preferred because they are better able to meet the needs of users than specialist devices and are less expensive to purchase. This reflects research which has cited the high cost of specialist assistive devices as a disadvantage of this technology (Foley & Ferri, 2012; McGookin et al., 2008). However, some of these barriers remained, and new technology had also created new challenges. Inaccessible webpages, for example, were a barrier to playing and purchasing music. Factors were also found to compound challenges associated with technology use. For example, difficulties associated with playing physical recordings or using portable devices were compounded by the presence of additional disabilities or limited motor skills due to age. This has important implications for the accessibility of technology for older users who are more likely to experience sight loss due to age-related sight conditions.

Secondly, VI was found to impact on music-making. Stave notation was reported to be a challenge for all who participated in music-making, with some reflecting on the impact that this

had on musical learning during childhood. Amateur and professional musicians alike reported additional difficulties such as movement onstage, stagecraft and establishing a professional identity. These challenges are not uncommon amongst this population, as Baker and Green (2017) demonstrated in their work with VI musicians. The negative psychological impact of VI on engagement with musical notation and attitudes towards music-making was also highlighted.

Finally, participants reported several potential barriers to engagement with live music. One of the most important factors was the availability of a sighted companion, which was central to many participants' decisions to attend; without a sighted companion, attendance was considered an impossibility, particularly in cases where venues were unfamiliar. This was typically due to concerns regarding navigation. Challenges relating to inadequate lighting, difficulty accessing staff support and expressing needs to staff, and managing the physical environment were identified. These findings provide new insight into the experiences of VI attendees and build on the work of Attitude is Everything (2016), who acknowledge a current lack of exploration of the experiences of VI attendees. It was also notable that participants in all three of the current studies suggested that music events could result in feelings of sensory overload and disorientation. Whilst the sensory experience of live events has been considered in relation to young attendees with Autism Spectrum Disorder (Kempe, 2015), the sensory experiences of those with a VI has not yet been explored. Feelings of sensory overload can be a concern for individuals who have a VI and rely on their hearing to orientate themselves and communicate with others.

Findings from the current study show that VI attendees may face challenges when attending live events and may miss out on events because of these challenges. Findings relating to the availability of information and specialist services at events highlight several limitations. Whilst most participants who used AD and/or TT believed they contributed positively to live music experiences, the promotion of, and provision of these services was considered inadequate by some. Inaccessible information about these services, and other accessibility provisions, was also highlighted as a barrier to their use. Some participants went to great lengths to access event information, others were unsure of where information could be found, and many highlighted the necessity of phoning venues up rather than searching for information online. Online information searching has been highlighted as particularly challenging for individuals who have a VI (Di Blas et al., 2004; Sahib et al., 2012) and Attitude is Everything (2018) found that venue websites are often inaccessible to screen reader users. Given the range of functions fulfilled by live music in the current study and the relatively high levels of attendance at music events compared to other types of event in the survey sample, considerations of how events might be made more accessible to VI individuals is essential.

13.2.3 Improving access to music and musical experiences for VI individuals

The third aim of the thesis was to consider ways to overcome the challenges identified throughout the current research in order to improve access to music and musical experiences for individuals who have a VI. Given the small number of participants whose experiences contributed to the themes relating to barriers to music-making in the current study, coupled with the comprehensive exploration of the experiences of VI musicians in the work of Baker and Green (2017), the recommendations below do not address challenges associated with music-making. The reader is directed to the work of Baker and Green (2017) for details regarding the strategies employed by VI musicians in relation to musical learning, musical identity, using technology, and participating in musical activities. However, the recommendations presented do address those challenges identified in relation to music listening at home and attendance at live music events.

As discussed in Chapter 7 (Section 7.3), participants acknowledged that through technological developments they had been able to overcome many of the challenges previously associated with musical engagement. New technology had offered easier access to collections, online music services, and information. However, some had not adopted these technologies and many agreed that learning to use new technology was a challenge. Three key recommendations have been identified as a direct result of the current research which would increase knowledge of technology amongst VI individuals, reduce any feelings of apprehension relating to technology use, and provide opportunities to engage with music in different ways through technology (see Table 13.1). Recommendations focus on the experiences of individuals who are typically less technologically engaged and may face the greatest barriers to technology use, such as elderly adults and/or those with late-onset sight loss. These recommendations also address the importance of supporting the knowledge development of members of VI individuals' support networks. Participants in the current project acknowledged their reliance on loved ones for technological support, thus, the education of these individuals may be useful in disseminating relevant information to VI users. It should be noted that these recommendations require the collaboration of different groups and organisations, such as charities and local technology companies (see second recommendation, Table 13.1). Whilst such organisations may have different primary objectives (e.g. supporting VI individuals versus selling their products), the experiences of interview participant Victoria with her local Apple store (discussed in Chapter 7, Section 7.1) demonstrate that such collaborations may be successful in improving VI users' understanding of their technological devices and the accessibility features available to them.

Table 13.1: Actions addressing music listening and technology.

Action	Groups involved	Outcomes
<p>1) Produce a leaflet containing information about technology for music listening. This leaflet should be available in print and digital formats (accessible via a screen reader) and should include:</p> <ul style="list-style-type: none"> • An overview of devices and music services available, including considerations of accessibility and cost. • Any upcoming events or training available from charitable organisations or technology companies. 	<p>Target group: VI individuals and members of their social support networks.</p> <p>Providers: Myself, in collaboration with charitable organisations.</p> <p>Distribution: Charitable organisations.</p>	<p>Increase knowledge regarding technology for music listening amongst individuals who have a VI.</p> <p>Increased (or continued) engagement with music through technology.</p>
<p>2) Technology workshops for music listening providing support in:</p> <ul style="list-style-type: none"> • Using technological devices and different accessibility settings (tailoring support to different levels of VI and the changing needs of users). • Accessing music and using online music services. 	<p>Target group: VI individuals with limited experience of using new technologies or those who have experienced recent changes to their sight impacting on technological engagement.</p> <p>Providers: Charitable organisations and/or local technology companies (e.g. Apple, Samsung experience stores).</p>	<p>Create opportunities for individuals with a VI to gain hands-on experience with different devices, reducing apprehensions and increasing knowledge of devices and services which might make accessing music easier.</p> <p>Increased (or continued) engagement with music through technology.</p>
<p>3) Music appreciation sessions providing:</p> <ul style="list-style-type: none"> • Opportunities to listen and discuss music with others. • Support in engaging with older, physical listening technologies which may hold significance to elderly individuals (e.g. vinyl record players). 	<p>Target group: VI individuals. May be particularly beneficial for elderly adults with late-onset sight loss for whom access to music may be reduced.</p> <p>Providers: Charitable and/or community organisations and care providers. This activity might also be supported at home by caregivers, if technology is available.</p>	<p>Reminiscence (positive well-being outcomes).</p> <p>Opportunities to engage with music in a tactile way which may not be available to elderly individuals at home.</p> <p>Increased (or continued) engagement with music through technology.</p>

Throughout this thesis, multiple barriers have been highlighted in relation to live event attendance. In Chapter 9, participants were asked to reflect on how events might be made more accessible for attendees who have a VI. Nine key recommendations have been devised from these responses. Tables 13.2 address concerns relating to navigation, Table 13.3 addresses bookings, specialist services and written materials, and Table 13.4 addresses practice and policy. Actions are organised under the categories ‘Small actions’ and ‘Larger actions’, in acknowledgement of the difference in the financial and practical commitment needed to address these recommendations. Once again, these actions require the commitment and resources of various stakeholders, including the venues themselves, charitable organisations supporting individuals with a VI, and those working to increase the accessibility of events for disabled attendees (e.g. Attitude is Everything and the current research project). It is also recognised that financial limitations may limit the ability of some small or independent venues to implement all of these recommendations. For example, supplying Braille copies of materials, or headphones to provide audio introductions, may cost more than a small, independent venue can afford. However, alternatives such as digital versions of materials may be a good compromise; these would be accessible to screen reader users and could be made available prior to attendance at events. Recommendations which address the standardisation of practice and policy at venues pose perhaps the greatest challenge. Implementing such change may appear a considerable task, but partnerships between Attitude is Everything, other charities, organisations, and venues (e.g. the STAR Accessible Ticketing Working Party discussed in Chapter 12, Section 12.2.3) have already made huge progress towards understanding and improving the experiences of disabled attendees. Attitude is Everything have used their research to inform venues and organisers on how to make events more accessible to disabled attendees, and in turn, growing numbers of venues and organisers have committed to improving the accessibility of their events by signing up to the charity’s Charter of Best Practice. The recommendations listed here address the current lack of knowledge relating to the experiences of VI attendees, a topic which Attitude is Everything (2016) planned to address ‘through future collaborative guidance’. The current project could offer this source of collaboration.

Table 13.2: Actions addressing navigation at live music events.

Action		Groups involved	Outcomes								
1) Improve lighting at live music events											
Small actions	<ul style="list-style-type: none"> • Ensure lights are kept up until all attendees are seated. • Adequate lighting inside performance spaces and other areas of the venue (e.g. foyer, toilets, stairwell). • In indoor venues, strip lighting could be used to demarcate steps and spotlights could be used to up-light walkways. • Light paths between stages and facilities at outdoor venues and provide floodlighting between sets to ensure safe movement. 	<p>Target group: VI attendees (may also benefit other attendees with a disability).</p> <p>Providers: Event organisers and music venues.</p>	<p>Easier navigation for VI attendees.</p> <p>Greater confidence and enjoyment when attending live events.</p>								
2) Alter pre-performance protocol for VI attendees											
Small action	<ul style="list-style-type: none"> • Allow and advertise early-entrance into venues. 	<p>Target group: VI attendees (may also benefit other attendees with a disability).</p> <p>Providers: Event organisers and music venues.</p>	<p>Overcome concerns regarding navigating in crowded environments.</p> <p>Easier access to help and support.</p> <p>Greater confidence and enjoyment when attending live events.</p>								
Larger action	<ul style="list-style-type: none"> • Ensure service/help desks are in an accessible location (e.g. near entrance, not up/down steps). Provide details of this location in online access information. 			3) Provide sighted support for VI attendees				Small action	<ul style="list-style-type: none"> • Use of existing concert buddy schemes and organisations (improve access information provided). 	<p>Target group: VI attendees.</p> <p>Providers: Charitable organisations, local councils, existing schemes and organisations.</p> <p>Promotion: Charitable organisations and music venues.</p>	<p>Overcoming concerns regarding navigations at live events.</p> <p>Greater access to live events.</p> <p>Greater confidence and enjoyment when attending live events.</p>
3) Provide sighted support for VI attendees											
Small action	<ul style="list-style-type: none"> • Use of existing concert buddy schemes and organisations (improve access information provided). 	<p>Target group: VI attendees.</p> <p>Providers: Charitable organisations, local councils, existing schemes and organisations.</p> <p>Promotion: Charitable organisations and music venues.</p>	<p>Overcoming concerns regarding navigations at live events.</p> <p>Greater access to live events.</p> <p>Greater confidence and enjoyment when attending live events.</p>								
Larger action	<ul style="list-style-type: none"> • Group attendance at events providing sighted guides. 										

Table 13.3: Actions addressing tickets, specialist services and written materials at live music events.

Action		Groups involved	Outcomes
4) Improving the experience of booking tickets			
Small actions	<ul style="list-style-type: none"> • Improve online systems to ensure that access requirements can be communicated and, where needed, access provisions can be booked • Avoid categorising attendees based on ‘type’ of disability. Venues should focus on the unique requests of each attendee • Ensure disability phonelines are adequately staffed, particularly at times of ticket release 	<p>Target group: VI attendees (may also benefit attendees with other disabilities)</p> <p>Providers: Event organisers and music venues</p>	<p>Easier access to appropriate support at venues</p> <p>Greater confidence when booking tickets</p> <p>Reduced waiting time on phonelines and a more positive booking experience</p>
5) Increase access to specialist services such as AD and TT			
Small actions	<ul style="list-style-type: none"> • Greater promotion of existing services (ensure information is available at time of ticket release) • Adequate information provided online and during booking 	<p>Target group: VI attendees</p> <p>Providers: Event organisers and music venues, AD service providers</p>	<p>Greater awareness of the specialist services available to VI attendees</p> <p>Greater enjoyment at events</p>
Larger action	<ul style="list-style-type: none"> • Increase the number of AD performances available (a provisional solution may be to vary the days that AD and TT are available) 		<p>Increased attendance of VI individuals</p>
6) Improve access to written materials at live events			
Small actions	<ul style="list-style-type: none"> • Materials in alternative formats (e.g. Braille and digital copies). Make digital copies available before the day of the performance, giving attendees a chance to download, save, and read documents • ‘Opt-in’ email reminders on the day of a performance containing basic information about the upcoming event (location, time, supporting and main acts, instructions for VI attendees) 	<p>Target group: VI attendees</p> <p>Provider: Event organisers and staff members at venues. Collaboration with charitable organisations to ensure accessible materials</p>	<p>Equality in access to information amongst event attendees</p>
Larger action	<ul style="list-style-type: none"> • Verbal announcements of programme items delivered by venue staff. Similar to Audio Introductions, providing information about upcoming items through headphones (available on arrival). 		

Table 13.4: Actions addressing accessibility, practice and policy.

Action	Groups involved	Outcomes	
7) Improving information regarding accessibility of events			
Small actions	<ul style="list-style-type: none"> Ensure comprehensive online accessibility information which outlines policies, access schemes, and provisions for VI attendees. This must be apparent from the home screen of webpages and accessible to screen-reader users and through desktop and mobile view. For venues which have not been purpose built for music events, there must be transparency regarding potential accessibility issues. 	<p>Target group: VI attendees (may also benefit attendees with other disabilities).</p> <p>Providers: Event organisers and music venues.</p>	<p>Allows independent research by individuals who have a VI.</p> <p>Access to appropriate support and access schemes for VI attendees.</p> <p>Greater confidence and enjoyment when attending events.</p>
8) Improve disability training of venue staff			
Larger actions	<ul style="list-style-type: none"> Disability training for all staff members, focusing on addressing and documenting the needs of individuals with different types of disability, and communication. Guide Dog policy must be communicated to all staff through adequate training and support materials. There must be a clear line of communication from management through to floor-staff to ensure legal policies are upheld consistently. 	<p>Target group: VI attendees (may also benefit attendees with other disabilities).</p> <p>Providers: Venue management, external training organisations, representatives from charitable organisations (e.g. Guide Dogs UK).</p>	<p>Supportive and confident staff members.</p> <p>Adherence to legal requirements in all venues.</p> <p>Greater enjoyment and confidence at live events for attendees with a VI.</p>
9) Consistency in practice and policy through information dissemination			
Larger actions	<ul style="list-style-type: none"> Create a leaflet outlining the key findings from the current project relating to the experiences of VI attendees. UK-wide dissemination of information would ensure that all venues have the guidance needed to make improvements. This would offer the greatest chance to improve practice across the country and standardise policy. 	<p>Target group: VI attendees (may also benefit attendees with other disabilities).</p> <p>Provider: Myself, venues, charitable and governmental organisations, and disabled attendees (who must demand the support that is entitled to them).</p>	<p>Increased accessibility of events and greater attendance amongst disabled groups.</p> <p>Greater enjoyment and confidence at live events for attendees with a VI.</p>

13.3 Evaluation of approach and methods

13.3.1 Adopting a phenomenological approach

This thesis has taken a phenomenological approach to exploring the musical lives of participants, acknowledging the subjective nature of engagement with music through in-depth exploration of participants' experiences, beliefs and perceptions. As in the work of Baker and Green (2017), the value of this approach has been illustrated by the diversity of musical experiences and reported challenges within, and across, participants' accounts. Representation of the unique aspects of participants' musical lives, in a sample which varied in both musical experience and their experience of VI, is a key strength of the current thesis.

In addition to a phenomenological approach, the thesis has adopted a participatory view of research (Boylorn, 2008). One of the aims of the thesis was to consider where, and how, musical experiences might be made more accessible to individuals who have a VI. Participant contributions have been paramount to addressing this aim. With regards to event accessibility, giving participants the opportunity to reflect on areas for improvement meant that the recommendations set out in the current chapter are not only based on my interpretation of the challenges articulated by participants, but on their own thoughts of what might be most beneficial to VI attendees. This greatly increases the real-world applicability of findings. Aligning with the values of IPA, this approach considers participants to be the experts on the subject under exploration (Smith & Osborne, 2008). This approach has offered members of the VI community a voice and the opportunity to partake in research with the potential to positively impact on their lives, and the lives of others (Boylorn, 2008). As such, this project has been a collaborative one, with a focus on developing an equal and reciprocal relationship between participant and researcher, whereby findings of the research directly benefit the individuals who participate in the research (Trainor & Bouchard, 2013).

13.3.2 Strengths of a mixed-methods approach

This thesis is the first of its kind to employ a mixed-method approach in an exploration of the everyday musical lives of the wider VI community in the UK. The project took a reflexive approach to methodology, with a sequential mixed-methods approach allowing the results of each study to inform the focus, design and implementation of the next. Given the lack of existing literature exploring everyday musical engagement of individuals with a VI, this approach was central to the development of the methodological design.

A mixed-methods approach was useful in allowing a comprehensive and systematic exploration of musical engagement in the sample population. Qualitative methods allowed consideration of individuals' personal accounts, opinions and beliefs, and considerations of musical life within the wider context of their everyday lives. In contrast, quantitative data collection was valuable

in exploring overarching patterns in respondents' experiences and highlighting key concerns relating to musical engagement in this group. Mixed-methods offered the opportunity to explore key topics using multiple methods, which provided comprehensive insight into the experiences of this sub-population.

In addition, the gathering of both qualitative and quantitative data within the survey study was useful in ensuring participants felt able to contribute fully and report their experiences in their own words. Open-ended responses relating to live events, for example, allowed participants to expand on responses to quantitative measures and, as discussed above, contribute their own views on improving accessibility of these events. It was notable that almost all participants responded to all three open-ended questions which addressed live events, suggesting that these questions were important in gaining a comprehensive understanding of their experiences.

13.3.3 Methodological considerations and ethical implications

The current thesis was systematic in its approach to exploring the everyday musical experiences of individuals who have a VI. The methodological techniques employed at each stage of data collection have been described in detail, in order to provide complete transparency regarding the processes involved in data collection and analysis. In line with Guba and Lincoln's concept of 'Dependability', this transparency allows the reader to 'explore the process, judge the decisions that were made, and understand what salient factors in the context led the evaluator to the decisions and interpretations made' (p. 242). Documentation of process and method is a central facet of evidencing quality in research (Guba & Lincoln, 1989).

Focus groups offered a useful tool for gathering initial data relating to the musical lives of individuals with a VI, and a broad overview of the research topic at-hand. However, it should be noted that focus groups may not always offer the ideal environment in which to explore musical engagement. High levels of musical experience and training appeared to impact negatively on the responses of one focus group member who was a non-musician. This individual appeared to feel less able to express themselves in a group where others appeared more knowledgeable of the research topic. Research employing this method must ensure that all participants have the chance to express themselves (interview interjection may encourage participant contribution) and must endeavour to create a friendly environment where participants feel comfortable (the opening question in the current study gave everyone the chance to settle into the environment before group discussion commenced).

Semi-structured interviews provided a valuable tool of exploration in the current study. Reflecting the aims and values of IPA, semi-structured interviews allowed detailed exploration and a comprehensive account of the unique musical lives of participants. This stage of the research process was also essential in providing greater understanding of topics and challenges

identified during the focus groups. Whilst the generalisability of findings was not the aim of such a detailed interview study with a small number of participants, there were clear similarities in the comments of many interview participants. These findings, taken alongside data gathered in the other two studies, indicates that findings from the current thesis do offer some insight into the experiences of the wider VI community. However, this stage of data collection did raise some unanticipated ethical concerns. As discussed in Chapter 3 (Section 3.2.5), informed consent was gained from all participants at each stage of data collection. However, some limitations of this concept have been made evident in the current project. The qualitative stages of data collection aimed to allow participants to express their opinions and experiences freely, and conversations were guided by the discussions that they deemed most important. However, it is apparent that this freedom may be problematic in terms of establishing fully informed consent (a concern raised in Chapter 3, Section 3.2.5). In the case of the participant whose data was removed from analysis in the interview study (see Chapter 3, Section 3.5.2), the informed consent process did not, and could not, address the sensitive nature of the interview that ensued. Whilst every effort was made to ensure that all participants were aware of the experiences associated with participation, the nature of qualitative data collection altered the extent to which fully informed consent could be obtained. Decisions relating to the running of this interview, despite its content's limited usability in the research project, and the removal of this data from analysis due to concerns relating to anonymity, were also unexpected ethical considerations during the research process. Given the detail and breadth of experiences divulged during the interview process, it appeared important to allow this participant to speak openly about their experiences, regardless of the relevance of these experiences to the study. Whilst the data collected did not contribute to the findings of the study, it was hoped that talking through their lived experiences was a positive process of catharsis for this individual.

Finally, there were several benefits of employing survey techniques in Study 3, not least the opportunity they provided to reach a greater number and range of participants than had been possible with the previous two studies. As such, the quantitative data gathered in this study are a valuable supplementary source which contribute greatly to providing a comprehensive understanding of the musical experiences of individuals who have a VI. However, surveys do not offer the ideal tool for exploring the subjective and complex nature of musical experiences (*cf.* Greasley, 2008). As Denscombe (2010) writes, 'Surveys provide a snapshot of how things are at a specific point in time' (p. 12). In order to offer a more nuanced exploration of musical engagement in the current survey, data gathered during earlier stages of data collection was used to inform the construction of questions, and wherever possible, respondents were given the opportunity to give additional information in open-ended responses.

13.3.4 Sampling

The 132 participants involved in the three studies had a broad age range, from 16 to 94 years, and a near equal split of female and male participants. However, it should be noted that participants' ages were not a true representation of the current VI population in the UK. In the survey study, the majority of participants were aged 36 to 45 years, and in the interview study, 15 of the 20 participants were aged below 60 years. This contrasts with the high number of adults over the age of 75 years estimated as living with sight loss (1.2 million), and the associated prevalence of age-related VI in the UK (Slade & Edwards, 2018). This may reflect the broader challenge of engaging elderly adults in research (Davies et al., 2010; McMurdo et al., 2011; Shearer, Fleury & Belyea, 2010), and the recruitment of respondents primarily through email and social media, with older adults using the internet and social media less than younger age groups (Bell et al., 2013; Choi & DiNitto, 2013).

It is also acknowledged that representation of individuals with different severities of VI was not achieved in the current study. Just one participant in the focus group and 15 survey respondents reported having a SI rather than a SSI. Results of the survey suggested some distinct differences in the use of music between these two groups which were surprising; those with less severe impairments appeared to use music more to fulfil a number of functions. However, a lack of representation of those with SI in the qualitative studies means that this project was unable to offer detailed exploration of these differences, which may have illuminated this finding. Furthermore, all but one of the semi-structured interview participants had an early-onset impairment, and this individual had been living with her impairment for several decades. Literature shows that individuals with late-onset sight loss may experience the greatest negative psychological impacts of VI (Dawson et al., 2014; Girdler et al., 2008). As such, it would have been beneficial to gather qualitative data relating to the musical experiences of participants who had experienced sight loss at different times in their life. Recruitment of participants through charitable organisations may have meant that those with more recent sight loss (yet to seek support from such organisations) were not well-represented in the current project.

The self-selecting nature of the sample was a concern during recruitment, because of the worry that only those with a high level of musical ability would volunteer to participate. However, the variety of musical backgrounds and the low levels of musical training exhibited in the survey suggested that this was not the case. As mentioned previously, it is possible that participants had a greater interest in music than the wider VI community, but this may have been beneficial to the current study; participants were able to reflect on a wide range of experiences and were forthcoming in sharing these experiences during the research process. As Sharma (2017) suggests, self-selecting participants are likely to be committed to taking part in a study which may mean a greater willingness to provide insight into the phenomenon being explored.

13.4 Future research

The current thesis has highlighted a number of areas of research which would benefit from future investigation. Firstly, the popularity of smart speakers exhibited in the survey sample and the enthusiasm with which one interview participant described his engagement with this technology suggests that these devices are becoming increasingly popular with VI users. However, the use of these devices by this group for musical engagement, and indeed, other daily tasks, has yet to be explored. As the use of these devices increases, further research is needed to explore the ways in which they are perceived and used by this group, and provide insight into the benefits and potential pitfalls relating to the experiences of VI users.

Qualitative and quantitative data provided useful insight into the musical functions, importance of music, and past and present musical experiences of participants. However, the survey offers no comparison of these topics between those with and without a VI. Results of the current study, and those of Park et al. (2015) suggest that music may have a more important role to play in the lives of those with a VI, but further exploration comparing the above facets of musical engagement for these groups would be useful. Comparisons of the experiences of VI participants with those who have different and additional disabilities may also be useful in highlighting the potential barriers to musical engagement and participation experienced by these individuals. The survey provided some preliminary data relating to the impact of disability and comorbid conditions on live music experiences for those who have a VI, but further research which compares the experiences of a greater number of participants is needed. Exploration relating to the technological experiences of this group might also be useful in highlighting the barriers and benefits associated with different devices and services for those with different types of disability.

Investigation of live music experiences in the current thesis required participants to recall memories of attending events in the past. Literature highlights the concerns relating to the reliability of retrospective accounts (Schwarz, 2007) and several interview participants acknowledged purposefully ‘forgetting’ some experiences to avoid additional upset or frustration. Research methods which consider the experiences of VI attendees whilst in attendance at live events or during the booking process, such as ESM, could offer accurate, real-time insight into the experiences associated with live events for this group. This could also reveal the thought processes and coping mechanisms employed when negative incidents occur. Jessup et al. (2017) found success in using a digital app to gather data for an ESM study exploring social experiences of VI students in school. As such, ESM may offer an accessible tool for exploring the experiences of VI participants.

Finally, given the suggestion of numerous participants for better-quality training for members of staff to support attendees with both a VI and other/additional disabilities, it may also be

useful to explore this topic from the perspective of venue staff and event organisers. This would develop the quantitative data provided by Webster et al. (2018) which suggests that whilst the importance of accessibility is recognised by event promoters, disability training for both venues and promotional companies is still lacking. In-depth exploration of the experiences of staff could provide insight into how training might be better tailored to meet the needs of VI and other disabled attendees. Future research could evaluate current disability training from the perspective of both staff and VI attendees, in order to develop a scheme which can support staff in their role of providing the highest quality support for these individuals.

13.5 Implications

This thesis has several important implications. First and foremost, findings have not only identified barriers to musical engagement for individuals who have a VI but offered a means of addressing these barriers. Music has been found to play an important role in the recreational lives of this group in past research and the current study (Park et al., 2015), however, literature and findings from this project demonstrate the difficulties that these individuals may face engaging in leisure and social activities (Gold, Shaw & Wolffe, 2010; Horowitz, 2004; Salminen & Karhula, 2013). Expanding on the work of Attitude is Everything, this thesis has identified the barriers and challenges faced by VI attendees at live music events and has provided recommendations that might help to overcome them. These recommendations were informed by participants' experiences and suggestions, and highlight the importance of different stakeholders, and VI attendees themselves, working to promote and improve the accessibility of events. Through its exploration of live event attendance, this thesis has contributed knowledge to the growing field of audience research and event accessibility. This comes at a time when venues and event organisers are actively seeking ways of reaching new audiences and reducing barriers to participation for minority or disadvantaged groups. To this end, the knowledge generated in this thesis has value and application beyond the academic institution.

In addition to exploring the live music experiences of those who have a VI, the current thesis contributes knowledge regarding other aspects of musical life and the importance of music to these individuals. This thesis has explored the musical lives of a group whose experiences have largely been missing from this field, despite the historic associations drawn between VI and musical life outlined in Chapter 2. The importance of music to this group was apparent, and so too were the unique functions of music which were identified in all three studies. Whilst therapeutic aspects of musical engagement were not the focus of the current thesis, it was apparent that music was used to meet a range of functions with implications for promoting and maintaining positive well-being. Musical activities have, thus far, received limited attention in explorations of VI individuals' lives, but findings suggest that access to music and musical

experiences may be of even greater importance to this group than to the general population. This highlights the importance of finding ways to support VI individuals in their musical endeavours, through provision of appropriate information, practical support, and accessible technology, events, and experiences. In particular, the importance of music to elderly participants with sight loss may be of interest to those who provide support to members of this group. Findings from this thesis suggest that older adults with a late-onset VI may face some of the greatest barriers to musical engagement, with factors relating to loss of mobility and independence, and adaptation to changing sight, creating further challenges for this group. Indeed, participants in the current study who experienced late-onset sight loss, or changes in vision over time, expressed concern regarding future engagement in music. Given the high prevalence of sight loss amongst elderly adults (Slade & Edwards, 2018), it is important to address the difficulties experienced by these individuals.

Finally, this thesis provides the first consideration of how technology is used for music listening by those who have a VI, building on literature which has documented the impact of technology on various aspects of daily living for these individuals (Gerber, 2003; Hakobyan et al., 2013). Findings relating to the positive experiences of technology use, such as increasing access to music and built-in accessibility features, and negative experiences, including inaccessible webpages or a lack of technological knowledge, contribute to wider understandings of the role of technology in the lives of individuals who have a VI. Furthermore, the challenges associated with technological engagement have implications for the design of technologies, the provision of information relating to their use, and the technological guidance provided by the support networks of individuals who have a VI, including charitable organisations who offer technological support to members. The fast-paced nature of technological developments, and the important role that technology often plays in musical engagement (Avdeeff, 2012; Brown & Sellen, 2006; Greasley et al., 2013), makes explorations of the accessibility of technology for different groups an important endeavour. Only by consulting with those who may face difficulties engaging with technology, can improvements to technological accessibility be made.

13.6 General conclusion

This thesis has provided insight into the everyday musical lives of individuals who have a VI. A series of studies which employed mixed-methods has provided both qualitative and quantitative data relating to role of music in the lives of this group. Findings demonstrated that individuals with a VI are involved in a range of musical activities and use these activities to meet a variety of functions. Results suggested that music may fulfil unique functions in the lives of these individuals and thus, may be of particular importance to them. However, VI was found to negatively impact on various aspects of musical life, including engagement with

technology for music listening, music-making, and attendance at live events, and findings highlight the need for further exploration of these impacts using larger samples and alternative methodological techniques. A series of recommendations has been provided which address the challenges faced in relation to music listening at home and attending live music events in order to increase the accessibility of music and musical experiences for individuals who have a VI. In conclusion, this thesis has explored the role that music plays in the lives of VI individuals and has highlighted the importance of ensuring that music and musical experiences remain accessible to those who have a visual impairment.

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Appendices

Appendix A: Classifications of visual impairment from the International Classification of Diseases (10th Revision) and the International Council of Ophthalmology

Appendix B: University of Leeds Ethics Application

Appendix C: Key terminology and definitions

Appendix D: Focus group schedule

Appendix E: Semi-structured interview schedule

Appendix F: Study 1 verbal information sheet

Appendix G: List of codes and themes identified during Study 1

Appendix H: Sample recruitment email for Study 2

Appendix I: Information sheet for participation in interview study

Appendix J: Participant biographies

Appendix K: Study 2 sample verbal consent form

Appendix L: Themes and subthemes identified in Study 2

Appendix M: Study 3 Survey

Appendix N: Musical fields worked in by participants in Study 3

Appendix O: Mean ratings of musical engagement statements for 'Late onset', 'Early onset' and 'Early onset with changes' groups in Study 3

Appendix P: Themes identified in relation to participants' most recent live music experiences and supporting comments

Appendix Q: Themes and subthemes relating to the impact of size on venue accessibility in Study 3

Appendix A: Classifications of visual impairment from the International Classification of Diseases (World Health Organisation, 10th Revision)

Definitions of visual impairments as outlined by the International Classification of Diseases, 10th Revision, ICD-10 (WHO, 2015).

ICD reference	Definition	Identification using visual acuity categories outlined in Table 2
(H54.0)	Blindness, binocular	Visual impairment categories 3,4,5 in both eyes
(H54.1)	Severe visual impairment, binocular	Visual impairment category 2, in both eyes
(H54.2)	Moderate visual impairment, binocular	Visual impairment category 1, in both eyes
(H54.3)	Mild or no visual impairment, binocular	Visual impairment category 0
(H54.4)	Blindness, monocular	Visual impairment categories 3, 4, 5 in one eye and categories 0, 1, 2 or 9 in the other eye
(H54.5)	Severe visual impairment, monocular	Visual impairment category 2 in one eye and categories 0, 1 or 9 in other eye
(H54.6)	Moderate visual impairment, monocular	Visual impairment category 1 in one eye and categories 0 or 9 in other eye.
(H54.9)	Unspecified visual impairment (binocular)	Visual impairment category 9

Appendix B: University of Leeds Ethics Application

UNIVERSITY OF LEEDS RESEARCH ETHICS COMMITTEE APPLICATION FORM¹



UNIVERSITY OF LEEDS

Please read each question carefully, taking note of instructions and completing all parts. If a question is not applicable please indicate so. The superscripted numbers (eg⁸) refer to sections of the guidance notes, available at <http://ris.leeds.ac.uk/uolethicsapplication>. Where a question asks for information which you have previously provided in answer to another question, please just refer to your earlier answer rather than repeating information. Research ethics training courses: <http://www.sddu.leeds.ac.uk/research-innovation/research-ethics-training-and-guidance>

To help us process your application enter the following reference numbers, if known and if applicable:

Ethics reference number:	PVAR 15-042
Student number and/ or grant reference:	200543055

PART A: Summary

A.1 Which [Faculty Research Ethics Committee](#) would you like to consider this application?²

- Arts and PVAC (PVAR)
- Biological Sciences (BIOSCI)
- ESSL/ Environment/ LUBS (AREA)
- MaPS and Engineering (MEEC)
- Medicine and Health (Please specify a subcommittee):
 - School of Dentistry (DREC)
 - School of Healthcare (SHREC)
 - School of Medicine (SoMREC)
 - School of Psychology (SoPREC)

A.2 Title of the research³

An exploratory investigation of the music listening experiences of blind adults and adolescents in the UK

A.3 Principal investigator's contact details⁴

Name (Title, first name, surname)	Claire Castle
Position	PhD candidate
Department/ School/ Institute	School of Music
Faculty	Faculty of Performance, Visual Arts and Communications
Work address (including postcode)	Removed

Telephone number	Removed
University of Leeds email address	mc13clc@leeds.ac.uk

A.4 Purpose of the research:⁵ (Tick as appropriate)

- Research
- Educational qualification: *Please specify: PhD*
- Educational Research & Evaluation⁶
- Medical Audit or Health Service Evaluation⁷
- Other

A.5 Select from the list below to describe your research: (You may select more than one)

- Research on or with human participants
- Research with has potential significant environmental impact.⁸ *If yes, please give details:*

- Research working with data of human participants
 - New data collected by qualitative methods
 - New data collected by quantitative methods
 - New data collected from observing individuals or populations
 - Research working with aggregated or population data
 - Research using already published data or data in the public domain
- Research working with human tissue samples (*Please inform the relevant Persons Designate if the research will involve human tissue*)⁹

A.6 Will the research involve any of the following:¹⁰(You may select more than one)

- Patients and users of the NHS (including NHS patients treated in the private sector)¹¹
- Individuals identified as potential participants because of their status as relatives or carers of patients and users of the NHS
- Research involving adults in Scotland, Wales or England who lack the capacity to consent for themselves¹²
- A prison or a young offender institution in England and Wales (and is health related)¹⁴
- Clinical trial of a medicinal product or medical device¹⁵
- Access to data, organs or other bodily material of past and present NHS patients⁹
- Use of human tissue (including non-NHS sources) where the collection is not covered by a Human Tissue Authority licence⁹
- Foetal material and IVF involving NHS patients

- The recently deceased under NHS care
- None of the above

You must inform the Research Ethics Administrator of your NRES number and approval date once approval has been obtained.

A.7 Will the research involve NHS staff recruited as potential research participants (by virtue of their professional role) or NHS premises/ facilities?

- Yes
- No

A.8 Will the participants be from any of the following groups? (Tick as appropriate)

- Children under 16¹⁶ *Specify age group:* _____
- Adults with learning disabilities¹²
- Adults with other forms of mental incapacity or mental illness
- Adults in emergency situations
- Prisoners or young offenders¹⁴
- Those who could be considered to have a particularly dependent relationship with the investigator, eg members of staff, students¹⁷
- Other vulnerable groups
- No participants from any of the above groups

Please justify the inclusion of the above groups, explaining why the research cannot be conducted on non-vulnerable groups.

The participants involved in the study will be registered as blind, and as such, are likely to be registered disabled. According to the Equality Act 2010, a disability is a physical or mental impairment that has a 'substantial' and 'long-term' negative effect on one's ability to do normal daily activities. As such, this group are legally considered 'vulnerable'. However, the inclusion of this population is central to the primary aim of the project, to explore the musical experiences of the blind population in the UK. To date, no research has considered the musical experiences of this population, and their inclusion in the literature will provide important new perspectives on the topic.

Inclusion of participants who are blind and aged 16-18 years is also an important aspect of the research design. Past research has found that music may play a particularly important role in the lives of teenagers and young adults (North, Hargreaves & O'Neill, 2000; Roberts, Henriksen & Foehr, 2009). As such, it seems essential to consider the experiences of this age group. The project aims to represent a diverse range of perspectives, and inclusion of this age group is a central part of achieving this aim.

A.9 Give a short summary of the research¹⁸

The proposed research aims to explore the role of music in everyday life for individuals with a severe visual impairment. This research will offer new perspectives on the topic of musicality and visual impairment, a field in which research has tended to focus on cognitive adaptation in visually impaired individuals (see Merabet, Rizzo, Amedi, Somers & Pascual-Leone, 2005) and their performance in auditory processing tasks (Wan, Wood, Reutens & Wilson, 2010; Voss et al., 2011; Röder & Rösler, 2003). Whilst such research provides important empirical evidence for the long-assumed, but previously anecdotal, association between visual impairment and musicality, consideration of the everyday listening experiences for the visually impaired is largely absent from the literature. Those who have approached the topic have tended to focus on the experiences of children (Pring & Ockelford, 2005; Matawa & Ockelford, 2009). A recent project carried out by Baker and Green

(results presented in part at the “Visually-impaired musicians' lives” conference, March 2015; also Baker, 2014) documented the practices, participation, and experiences of visually impaired musicians, however, no study has considered the musical experiences of the UK’s wider blind community. The proposed research will make important steps towards the recognition of vulnerable and minority populations in literature relating to the topic of everyday musical experiences, through its inclusion of a population that has, thus far, been unapparent in the literature.

The proposed research aims to explore the role of music in daily life for adults and adolescents with a severe visual impairment, and will expand on current understandings of the topic of everyday musical experiences among this sub-set of the population. The research will also assess accessibility of music for this population, investigating the perceived and actual barriers to listening experiences, and where appropriate, identifying means of making music more accessible to this population. The research will consist of three main research phases, and employ both qualitative and quantitative research techniques. Stage one will employ focus groups to gather initial data on the role of music in the lives of individuals who are blind. Focus groups will offer participants the opportunity to share and compare experiences, as well as providing a means of identifying salient concerns and benefits of music listening for this sub-set of the population. Stage two will consist of a series of semi-structured interviews with blind adults and adolescents to gather in-depth data regarding accessing music in everyday life. This stage of the research will provide the opportunity for participants to share personal perspectives on the role of music in their lives, the physical process of accessing music, and the barriers they experience whilst doing so. Stage three will be a follow-up questionnaire to explore trends in the listening behaviours of a wider sample of blind adults and adolescents. A questionnaire will also offer the opportunity to draw comparisons between the extent and nature of music listening within this population, and sighted populations sampled in existing literature. The questionnaire will be administered online, but Braille copies will also be made available. Participants will be recruited through mailing lists of organisations such as Action for Blind and the Royal National Institute for the Blind, and will be provided with a hyperlink to the online survey and contact details of the researcher if they wish to ask questions prior to taking part, or request a Braille copy. After participation in either of the first 2 stages of the research, participants will be given the option of providing their contact details if they are interested in being involved in further stages of the research. Contact details will be used to distribute information about the following studies, giving them ample information and time to decide whether or not they wish to take part.

A.10 What are the main ethical issues with the research and how will these be addressed?¹⁹

Working with vulnerable groups

As defined by the 1997 Consultation “Who Decides?”, issued by the Lord Chancellor’s Department, a vulnerable adult is one “who is or may be in need of community care services by reason of disability, age or illness; and is or may be unable to take care of him or herself, or unable to protect him or herself significant harm or exploitation”. As participants will be registered as blind, and consequently registered as disabled, it is essential that appropriate measures are in place to ensure that participants are appropriately safeguarded throughout the research process. Implementation of the measures outlined below, including consideration of the potentially sensitive nature of discussions between participant and researcher, attainment of fully informed consent, and appropriate provision of information regarding the treatment of data, will ensure that participants are comfortable at all stages of their involvement in the research.

It should be noted that use of the term 'vulnerable' is also contentious, and the researcher uses this term only to reflect legal terminology. Use of a label may result in stigmatisation, resulting in the assumption that an individual is less able than others to make decisions and to determine the course of his or her life. It may be most helpful to approach the term 'vulnerable' as a spectrum. Unlike some vulnerable individuals, the population in question retains the capacity to make their own decisions and to direct their own lives, and therefore the researcher can have confidence that the standard ethical measures in place are appropriate for safeguarding participants during the research process. Similarly, it must be remembered that the effects of visual impairment on the lives of participants are also likely to vary based on factors such as age, personality, and nature of visual impairment. Consequently, the perceived influence of visual impairments on daily life may differ greatly between participants. A sensitivity to this variation is essential throughout the research process.

Psychological health and safety of subject-participants

All appropriate measures will be taken to ensure that the psychological health and safety of participants is protected. The research aims to gain increased understanding and awareness of the impact of the experience of being visually impaired on a particular aspect (musical experiences) of participants' lives. As Lee (1993) suggests, issues that might be sensitive include those that are considered private or stressful, and those that, if revealed, might cause stigmatisation or fear. Visual impairment, therefore, may be a highly sensitive issue for some participants. Prior to any stage of research, participants will be given full disclosure of the nature, aims and process of the research, and the expectations of them. This will ensure that participants are able to give fully informed consent, and to feel as comfortable and prepared for the research as possible. In the interview setting, the researcher will be aware of any potential signs of distress of a participant, and use such signs as a cue to reassure participants of their right not to answer particular questions if they are not comfortable in doing so, and to reiterate their right to withdraw from the interview at any time. A debrief will be given, and participants will be provided with the researcher's contact details so that any questions that arise after their participation can be answered. If cases of retroactive withdrawal should occur, these will be dealt with on a case-by-case basis; the researcher will be sure to reiterate the fact that all data will be anonymised.

Obtaining informed consent

Recorded audio consent is deemed an appropriate means of obtaining informed consent from participants during the focus group and interview stages of the research. The validity of consent does not depend on the form in which it is given, but on it being given voluntarily by a person that is appropriately informed of the research aims and procedures, and who has the capacity to consent to this research. Attainment of verbal consent is considered a practically superior method of attaining informed consent in this case for two main reasons. Firstly, it facilitates communication between researcher and participants, more in line with guidelines issued by the Department of Health on communication with those who have sensory disabilities than attaining written consent. Secondly, information given about the study verbally is accessible to all blind participants, which may not be the case if information is only provided in Braille form. Some, or even most, of the participants may not read Braille. The Royal National Institute for the Blind found in 2005/2006 that there are an estimated 18,000 registered blind or partially sighted people in the UK that read Braille; this figure only accounts for 5% of this registered population. However, participants will be given the choice to read and sign their consent form in Braille if they so wish.

Prior to focus group sessions and interviews, information regarding the nature, aims and process of the research will be offered to the participants verbally or in Braille form, depending on their preference. A written copy of this information will be provided on the day, and if requested, a digital copy will be sent to a preferred email address to be accessed at a later time. Prior to the questionnaire stage of the research, information will be given in written form on the first page of the online survey (to be read by screen reading software), or if using a Braille copy, through a written consent form at the front of the questionnaire. In line with British Psychological Society guidelines, participants will be given ample opportunity to understand the nature, purpose, and anticipated consequences of their participation, so that they may give fully informed consent.

Participants aged 16-18 years of age will be able to give fully informed consent, in line with guidelines set by the British Psychological Society which state that individuals between the ages of 16 to 18 are able to give consent independently of those with parental responsibility. The researcher is confident that participants will be able to make a valid decision with regards to their participation, and that the application of these guidelines is appropriate for this research, in light of its low-risk nature.

Confidentiality and data protection

Participants will be assured (both in verbal information given, and in any written information sheets provided) prior to their involvement with any stage of the research, that data gathered will not be used for any purpose other than those described in the research outline, that their responses will be quoted anonymously, and that they will be referred to using pseudonyms. It will also be confirmed that contact details will be stored securely, and not shared with any other researcher or organisation. Following focus group sessions and interviews, participants will be asked if they give permission for their responses to be quoted in the research report verbatim, with the reiteration that no names will be published and pseudonyms will be used throughout. Participants will be assured that their data will be treated confidentially, and stored in a secure location (e.g. the University's secure server). The consent form will outline that fact that data may be deposited in the University's data deposit for use in relevant future research, so participants will be aware of any future use of the data they provide.

PART B: About the research team**B.1 To be completed by students only²⁰**

Qualification working towards (eg Masters, PhD)	PhD
Supervisor's name (Title, first name, surname)	Dr Alinka Greasley
Department/ School/ Institute	School of Music
Faculty	Faculty of Performance, Visual Arts and Communications
Work address (including postcode)	University of Leeds, School of Music, 12 Cavendish Rd, Leeds, West Yorkshire, LS2 9JT
Supervisor's telephone number	01133434560
Supervisor's email address	A.E.Greasley@leeds.ac.uk
Module name and number (if applicable)	N/A

B.2 Other members of the research team (eg co-investigators, co-supervisors)²¹

Name (<i>Title, first name, surname</i>)	Dr Karen Burland
Position	Co-supervisor
Department/ School/ Institute	School of Music
Faculty	Faculty of Performance, Visual Arts and Communications
Work address (<i>including postcode</i>)	University of Leeds, School of Music, 12 Cavendish Rd, Leeds, West Yorkshire, LS2 9JT
Telephone number	01133432579
Email address	K.Burland@leeds.ac.uk

Part C: The research**C.1 What are the aims of the study?²²(Must be in language comprehensible to a lay person.)**

The primary aim of the proposed study is to explore the role of music in daily life for those with a severe visual impairment. The project will offer the first systematic investigation of the everyday musical experiences of this population. Through this exploration, the project will provide new perspectives on the topic of everyday listening, from a population that has largely been absent from the literature. Inclusion of vulnerable and minority groups in such research is overdue, given the role that music has been shown to play in psychological well-being and the association found between visual impairment and reduced psychological well-being. The study aims to expand on current understandings of the role of music in everyday life, contributing to a more comprehensive understanding of the topic.

Based on data obtained in relation to the everyday musical listening experiences of blind adults and adolescents, the research aims to assess the accessibility of music to this population, with a view to considering their use of technology in music listening, and their perceptions and experiences of live music events. The study will identify perceived and actual barriers to various types of musical listening for the blind, with a view to achieving the project's final aim: to identify means of making music more accessible, where deemed appropriate by this population.

C.2 Describe the design of the research. Qualitative methods as well as quantitative methods should be included. (Must be in language comprehensible to a lay person.)

The research will use both qualitative and quantitative research techniques, carried out in three stages.

Stage one

Focus groups using a sample of blind individuals (4-6 participants) will be used to gather initial data on the role of music in their lives. Three or four sessions will be carried out to gain a broad range of perspectives. This method is deemed appropriate due to the current lack of existing literature focusing on the musical experiences of this population. Focus groups will offer participants the opportunity to share and compare experiences, as well as providing a means of identifying salient concerns and benefits of music listening for blind adults. Focus group sessions will be carried out on the premises of the charity Action for Blind People Leeds, and will be audio recorded and transcribed verbatim.

Stage two

A series of semi-structured interviews will be carried out with a sample of 10-15 visually impaired participants in their homes. This stage of the research will be used to gather in-depth data regarding accessing music in everyday life. Interviews will provide the opportunity for participants to share personal perspectives on the role of music in their lives, the physical process of accessing music, and the barriers they experience whilst doing so. It is hoped that this stage of research will allow the researcher to fully understand the process of accessing music as a blind music listener through explanations and observations of participants accessing music in their homes. The researcher may note "observations" during the interviews, to provide additional, non-verbal details of a particular action carried out by a participant. However, as this information is secondary to the discourse itself, particularly as the researcher will ask participants to talk-through their actions, the researcher is confident in her decision to approach this stage of the research as an interview, rather than an observation session. Topics of discussion may include how participants engage with their personal music collections, how they go about searching for new music, how and where they save and store music, or how they gather information and obtain tickets for live music events. The decision to carry out interviews in the homes of participants is vital to understanding the actual process and barriers to music listening for participants, ensuring findings are ecologically valid. It is also hoped that carrying out interviews in a familiar home environment will prevent apprehension of participants, and create a relaxed environment in which to discuss their experiences. Interviews will be audio recorded and transcribed verbatim.

Stage three

The third stage of the research will consist of a follow-up questionnaire, used to collect data regarding listening behaviours of a wider sample of blind adults, with a view to identifying trends in the data, including those related to the role of individual differences in listening behaviours of this population. A questionnaire will also offer the opportunity to draw comparisons between the extent and nature of music listening within this population, and sighted populations sampled in existing literature. The questionnaire will be administered online, but Braille copies will also be made available. Participants will be gathered through mailing lists of organisations such as Action for Blind and the Royal National Institute for the Blind, and provided with a hyperlink to the online survey, as well as contact details of the researcher if they wish to ask questions prior to taking part, or request a Braille copy. After participation in either of the first two stages of the research, participants will be given the option of providing their contact details if they are interested in being involved in further stages of the research. These details will be used to distribute information about the following studies, giving participants the information they need to decide if they would like to take part.

C.3 What will participants be asked to do in the study?²³

Whilst there will be three studies within the project, participants involved in one study will not be expected to participate in the other stages of the research, although participants from the first two stages of the research will be given the option of leaving contact details if they are interested in being involved in further stages of the research. The researcher will use contact details to send out information regarding the next stages of the research, ensuring potential participants have adequate time to read and consider the information, and make a fully informed decision regarding their involvement. A field work risk assessment form has been completed and attached for stages one and two of the research.

Stage one

Once informed consent has been obtained, participants will be asked to take part in a focus group session with the researcher and a total of 4-6 participants. Sessions will last approximately 1 hour, and will take place on the premises of the charity Action for Blind People Leeds. Participants will be expected to travel to the premises in order to take part in the session. It is hoped that some, if not all, of the participants will have had some involvement with the charity or visited the premises, making this an appropriate meeting place for the group. The sessions will be audio recorded and transcribed verbatim. Following the sessions, participants will be invited to leave contact details if they are interested in being involved in further stages of the research so that the research can contact them with details of the following studies.

Stage two

Once informed consent has been obtained, participants will take part in a semi-structured interview with the researcher. Interviews will last 45-60 minutes, and will be audio recorded and transcribed verbatim. Participants will be asked to engage verbally with the researcher on a one-on-one basis, and may be asked to demonstrate the use of devices or software if deemed appropriate for furthering their explanation of a particular experience or issue. Interviews will be carried out in the homes of the participants; carrying out the interviews in a timely manner is essential to ensure that the research does not intrude on the participants' time and space. Again, participants will be offered the opportunity to leave contact details if they are interested in being involved in further stages of the research.

Stage three

Participants will be required to listen (via screen reading software) or read (on a Braille copy) an informed consent form, and accept this, prior to completion of the questionnaire. The questionnaire will be kept as short as possible, and will not take longer than 30 minutes to complete. A minimum of open-ended questions will be asked to keep completion time of the questionnaire low; participants will largely be required to answer ratings scale or multiple choice questions.

C.4 Does the research involve an international collaborator or research conducted overseas:²⁴

(Tick as appropriate)

Yes No

If yes, describe any ethical review procedures that you will need to comply with in that country:

Describe the measures you have taken to comply with these:

Include copies of any ethical approval letters/ certificates with your application.

C.5 Proposed study dates and duration

Research start date (01/10/15): _____ Research end date (31/08/19):

Fieldwork start date (01/02/16): _____ Fieldwork end date (01/02/18):

C.6. Where will the research be undertaken? (i.e. in the street, on UoL premises, in schools)²⁵

Stage one

The focus groups will take place on the premises of the charity Action for Blind People Leeds. The research and the participants will be required to travel to the premises. As this stage of the research will be carried out outside University premises, a field work risk assessment has been completed (see attached); this highlights the potential risks for both researcher and participant, and ensures that health and safety protocols are met.

Stage two

Interviews will be carried out in the homes of the participants. Again, as this stage of the research will be carried out outside University premises, a field work risk assessment has been completed (see attached).

Stage three

The questionnaire will be administered online, accessible to participants from their PC, laptop, or personal devices. If Braille copies of the questionnaire are required, these will be posted to an address provided by the participant.

RECRUITMENT & CONSENT PROCESSES

C.7 How will potential participants in the study be:

(i) identified?

The research requires a sample of blind participants from the UK. Anyone aged 16 years and over that is registered as blind is welcome to take part. For participants aged 16-18 years, informed consent from the participants and from their parent or guardian will be required. Participants with any level of engagement with music will be encouraged to take part, and it will be made clear that even those who consider their level of engagement with music to be low are just as important to the project.

(ii) approached?

Participants may be approached in a number of ways. Firstly, they may be contacted by staff or associates of charities or organisations for the blind (e.g. Action for Blind People Leeds) to ask if they would like to participate. Secondly, individuals may be approached by others who have been involved in the project, who pass on details of the project word-of-mouth. Finally, participants from stages one and two of the research will be given the opportunity to indicate an interest in taking part in further studies, and to leave contact details with the researcher if they wish to be involved in the project further.

(iii) recruited?²⁶

Participants for the focus groups will be recruited through the mailing list of Action for Blind People Leeds. As the proposed project will carry out the sessions on the premises of the organisation, it would be advantageous to make use of the charity's contact with the blind community in Leeds and the surrounding areas. This will also ensure that participants for this stage of the research will be required to commit minimal time and effort (particularly with regards to travel), in order to participate. Participants for the interview stage of the research will also be recruited through mailing lists and organisations, but it is hoped that contact with participants involved in the focus groups, and with individuals working within the charity may also result in recruitment through word-of-mouth, and snowball sampling. Participants for the questionnaire stage of the research will be recruited through mailing lists of national charities and organisations, including Action for Blind People and the Royal National Institute for the Blind, as well as information and links posted to relevant websites and social media pages. If participants have indicated an interest in being involved in other stages of the research, and they have provided contact details, then participants may also be recruited by contact initiated by the researcher.

Due to the clearly defined target population, and the perceived difficulties of obtaining a large enough sample at each stage of the research, this variety of convenience sampling methods is deemed essential to meeting the recruitment needs of the project.

C.8 Will you be excluding any groups of people, and if so what is the rationale for that?²⁷

The proposed research aims to investigate the experiences of one minority group, blind individuals in the UK, and as such the research does not require specific consideration of the experiences of other populations. The use of sampling from the chosen population is central to the primary aim of project, to explore the musical experiences of adults and adolescents who are blind in the UK. To date, no research has considered the musical experiences of this population, and their inclusion in the literature will provide important new perspectives on the topic. In order to meet the aims of the research, it is appropriate only to investigate the experiences of the population in question.

Participants under the age of 16 years will also be excluded from the study. This is compliant with BPS guidelines that between the ages of 16 to 18, individuals are able to give consent independently of those with parental responsibility, but if participants are younger than 16 years, consent must be obtained from someone with parental responsibility. This prerequisite of participation will be highlighted on all recruitment and materials, and reiterated in the consent process.

C.9 How many participants will be recruited and how was the number decided upon?²⁸

Stage one

Three or four focus groups will be conducted, consisting of 4-6 participants. Exact numbers will depend on availability of participants and the amount of new information gathered in each session. It is predicted that any number of participants between approximately 12 and 20 would be appropriate to meet the primary aim of this stage of the research: to gain a range of views and experiences of music listening as a blind adult or adolescent.

Stage two

Semi-structured interviews will be carried out with a sample of 10-15 participants who are blind. Due to the depth of data gathered at this stage of the research, a smaller sample of participants than was used during the first stage of research is acceptable, to allow for the detailed levels of analysis required at this stage. Participants will be recruited to represent individual differences such as gender, age, and nature of visual impairment (e.g. congenital or late-onset).

Stage three

For the questionnaire stage of the research, it is hoped that as many participants as possible will respond. The aim of identifying and exploring patterns in the data, and investigating the experiences of a broad sample of the UK blind population will require as many responses as possible.

C10 Will the research involve any element of deception?²⁹

If yes, please describe why this is necessary and whether participants will be informed at the end of the study.

Participants will be fully briefed as to the process of the study, and the aims of the research fully articulated before consent to participate is given.

C.11 Will informed consent be obtained from the research participants?³⁰

Yes No

If yes, give details of how it will be done. Give details of any particular steps to provide information (in addition to a written information sheet) e.g. videos, interactive material. If you are not going to be obtaining informed consent you will need to justify this.

Informed consent will be obtained from participants prior to every stage of the research. Recorded audio consent is deemed the most appropriate means of obtaining informed consent from participants during the focus group and interview stages of the research. Attainment of verbal consent is considered a practically superior method of attaining informed consent for the population in question, for the primary reason that whilst some participants may read Braille, the majority of the visually impaired community in the UK do not (see question A10). However, participants will also be given the option of reading and signing a Braille copy of the consent form. Additionally, an information sheet will be provided in print form at the time of participation (so that next of kin may read aloud to the participant), and in a digital format after participation, if participants are happy to give a contact email address to send this to. This measure will ensure that even after participation, participants have access to important information such as details of their right to withdraw, and the researcher's contact details.

C.12 Describe whether participants will be able to withdraw from the study, and up to what point (eg if data is to be anonymised). If withdrawal is not possible, explain why not.

During stages one and two of the research (focus groups and interviews), participants will be able to withdraw from the study at any point, or may choose not to answer particular questions if they so wish. Participants will be informed of this right prior to their participation. Due to the detailed nature of the data gathered and the depth of analysis that will be carried out following field work completion, participants will be informed of their right to withdraw their data from the study up to 12 weeks after their participation. This is deemed an appropriate amount of time for participants to decide whether they wish their data to be withdrawn, whilst avoiding issues relating to anonymisation of data and aggregate coding. Participants of the online questionnaire will be unable to withdraw their data once the questionnaire has been completed, due to the survey results being anonymous. The information page prior to commencement of the questionnaire will detail that completion and submission of the questionnaire will be considered as the participants' consent to use their data for analysis and discussion; it will also highlight the anonymous nature of the survey.

C.13 How long will the participant have to decide whether to take part in the research?³¹

For stage one of the research, participants will have at least 2 weeks from the time that the recruitment materials are circulated to the time that focus groups take place. Ample time must be given for participants to decide whether they wish to take part, particularly as early planning of transport may be required for blind participants. For the interview stage of the research, the researcher will endeavour to be as flexible as possible with timings to meet participant preferences.

The online questionnaire will be available to complete at any time following its online publication, so participants may spend as much time during the research period deciding to take part in, and completing the questionnaire. The questionnaire will be available online for 4-6 weeks, depending on participant numbers and rate of completion.

C.14 What arrangements have been made for participants who might not adequately understand verbal explanations or written information, or who have special communication needs?³²

Due to the nature of participants' sensory impairment, all information during stages one and two of the research will be given verbally by the researcher. Additionally, the researcher will provide information sheets in a written format so that after participation, participants still have easy access to this information. A digital copy will be emailed to participants if preferred, so that they can access this information with the use of, for example, screen reading software. Participants will be given the option of reading and signing their informed consent form in Braille if this is preferable. During the questionnaire stage of the research, it is unlikely that issues will arise in relation to participants' ability to understand the instructions if they have already accessed the questionnaire online, as they will have demonstrated their ability to navigate successfully to the online questionnaire via links (circulated via email, websites or social media). It is likely that these participants will be using accessibility software, commonly screen reading software. However, the researcher will provide contact details on the instruction page of the questionnaire and encourage participants to get in contact if they encounter difficulties.

If, via snowball sampling or word-of-mouth recruitment through organisations and their associates, there are individuals who wish to participate and feel unable to complete the questionnaire online, it is hoped that they will seek assistance from whomever suggested their participation. This way, participants may be aided in their completion of the questionnaire, or alternatively, can be provided with the contact details of the researcher so that another means of accessing the questionnaire (i.e. a Braille copy) can be provided.

C.15 Will individual or group interviews/ questionnaires discuss any topics or issues that might be sensitive, embarrassing or upsetting, or is it possible that criminal or other disclosures requiring action could take place during the study (e.g. during interviews or group discussions)?³³

Yes No *If yes, give details of procedures in place to deal with these issues.*

In light of the researcher's obligation to protect the psychological health and safety of subject-participants, consideration of the implications of discussions relating to potentially sensitive topics during stages one and two of the research is necessary. It is possible that participants may feel uncomfortable or distressed discussing their visual impairment; such a severe sensory impairment may be associated with feelings of fear or stigmatisation. Several aspects of the research design will help to ensure that participants are not subjected to unnecessary distress. Firstly, prior to any stage of research, participants will be given full disclosure of the nature, aims and process of the research, and the expectations of them. This will ensure that participants are able to give fully informed consent, and to feel as comfortable and prepared for the research as possible. In this sense, any participant who feels unable to discuss topics related to the study aims will not grant their consent. Secondly, all of the participants within the focus groups will have a severe visual impairment, minimising the risk of feelings of stigmatisation or apprehension. The researcher aims to make the focus group sessions as comfortable and enjoyable as possible, allowing participants to share experiences and ideas. Third, during the focus groups and interviews, the researcher will be alert for any potential signs of distress of a participant, and use such signs as a cue to reassure participants of their right not to answer particular questions if they are not comfortable in doing so, and to reiterate their right to withdraw from the interview at any time. It is hoped that if the researcher has had prior contact with interview participants, that a certain level of trust and rapport will have been built, helping to ease any feelings of apprehension that participants may have towards an interview. Finally, a verbal debrief will be given following the first two stages of the research, and the researcher's contact details will be provided, so that any questions that arise or requests for retrospective withdrawal can be responded to as soon as possible.

C.16 Will individual research participants receive any payments, fees, reimbursement of expenses or any other incentives or benefits for taking part in this research?³⁴

Yes No

RISKS OF THE STUDY

C.17 What are the potential benefits and/ or risks for research participants?³⁵

As one of the primary aims of the study is to identify means of making music more accessible to blind music listeners, a long-term benefit for participants would be personal access to advice and knowledge published after completion of the research. In terms of more instantaneous benefits, participants in the first stage of the research will have ample opportunity to share experiences and ideas with other blind listeners, and indeed, may benefit from listening to the experiences of others. Benefits of participating in the second two stages of the research may be less obvious, but participants will be made aware of the importance of their contribution to the project; it is hoped that participants will consider their participation as not only essential to meeting aims of the research, but also a meaningful and worthwhile experience for them.

C.18 Does the research involve any risks to the researchers themselves, or people not directly involved in the research? *Eg lone working*³⁶

Yes No

If yes, please describe:

Whilst risks involved in the various stages of the research are minimal, the researcher will be conducting lone work; namely interviews carried out off University premises. Where interviews are due to take place, the researcher will ensure that care is taken whilst travelling to the destination, and that others are aware of when and where the interview will take place, and when the researcher is due to return.

Focus group sessions present minimal risk to the researcher, and the premises on which they will be conducted (Action for Blind People Leeds) is public, as well as familiar to the researcher, and possibly the participants. No risks are foreseen in relation to the final stage of the research (online questionnaire).

Is a [risk assessment](#) necessary for this research?

Yes No

RESEARCH DATA

C.19 Will the research involve any of the following activities at any stage (including identification of potential research participants)? (Tick as appropriate)

- Examination of personal records by those who would not normally have access
- Access to research data on individuals by people from outside the research team
- Electronic transfer of data
- Sharing data with other organisations
- Exporting data outside the European Union
- Use of personal addresses, postcodes, faxes, e-mails or telephone numbers
- Publication of direct quotations from respondents
- Publication of data that might allow identification of individuals to be identified
- Use of audio/visual recording devices
- FLASH memory or other portable storage devices

Storage of personal data on or including any of the following:

- Manual files

- Home or other personal computers
- Private company computers
- Laptop computers

C.20 How will the research team ensure confidentiality and security of personal data? E.g. anonymisation procedures, secure storage and coding of data.³⁷

During recruitment for the first two stages of the research, personal details, including name and contact details, may be saved and used for the purposes of arranging focus groups and interviews. Following participation, participants will be given the choice to either leave contact details with the researcher if they are interested in being involved in future stages of the research, or to have their contact details removed. Participants will not be obliged to leave contact details. Participants may opt to provide a contact email address so that a digital copy of an information sheet may be sent to them. Depending on participants' wishes with regards to further involvement with the project, contact details will either be discarded after they have served their purpose of facilitating the arrangement of focus groups and interviews, or after information sheets have been sent out (as soon as possible after their participation). Contact details will be held by the primary researcher only, and stored securely on the University's M:Drive.

Data gathered during the focus groups will not be anonymous to the researcher or to the rest of the focus group. The information sheet will outline the fact that confidentiality cannot be guaranteed because topics will be discussed as a group, and participants will be advised that if they feel that contributing to a particular discussion would make them uncomfortable, they are not obliged to do so. Similarly, data gathered during the interviews will be anonymous to the researcher. However, measures will be in place to ensure confidentiality is upheld. Both focus group data and interview data will be anonymised through the use of pseudonyms. Pseudonyms will be assigned to each participant following their focus group/interview, and this name will be used from the earliest stage of data processing, in this case, transcription.

It will be necessary for data to be transferred electronically, particularly as electronic recording equipment will be used. Both the focus groups and the interviews will be audio recorded and data transferred to the University's M:Drive for secure storage. Data will only be accessible to the primary researcher, and if transferred via portable electronic storage devices, this will be done as quickly as possible and the storage device cleared of data.

Any paper surveys will be kept in a locked filing cabinet in a locked office on university premises.

C.21 How will you make your research data available to others in line with: the University's, funding bodies' and publishers' policies on making the results of publically funded research publically available (while not compromising requirements around data protection legislation)?

Data collected during research will be deposited in the University of Leeds Research Data repository.

C.22 How do you intend to share the research data? (Indicate with an 'X')

- Depositing in a specialist data centre or archive
- Submitting to a journal to support a publication
- Depositing in a self-archiving system or an institutional repository
- Dissemination via a project or institutional website
- Informal peer-to-peer exchange

- No plans to report or disseminate the data
- Other, please state: _____.

C.23 How do you intend to report and disseminate the results of the study? (Indicate with an 'X')
Refer to <http://ris.leeds.ac.uk/ResearchDissemination> and <http://ris.leeds.ac.uk/Publication> for guidance.

- Peer reviewed journals
- Internal report
- Conference presentation
- Publication on website
- Other publication
- Submission to regulatory authorities
- No plans to report or disseminate the results
- Other, please state: _____.

C.24 For how long will data from the study be stored? Please explain why this length of time has been chosen.³⁸

10 years (after publication) _____ months. In accordance with suggestions of the University of Leeds that research data should be *preserved and accessible* for ten years.

CONFLICTS OF INTEREST

C.25 Will any of the researchers or their institutions receive any other benefits or incentives for taking part in this research over and above normal salary or the costs of undertaking the research?³⁹

- Yes No

C.26 Is there scope for any other conflict of interest?⁴⁰

- Yes No

C.27 Does the research involve external funding? (Tick as appropriate)

- Yes No

PART D: Declarations

Declaration by Chief Investigators

1. The information in this form is accurate to the best of my knowledge and belief and I take full responsibility for it.
2. I undertake to abide by the University's ethical and health & safety guidelines, and the ethical principles underlying good practice guidelines appropriate to my discipline.
3. If the research is approved I undertake to adhere to the study protocol, the terms of this application and any conditions set out by the Research Ethics Committee.
4. I undertake to seek an ethical opinion from the REC before implementing substantial amendments to the protocol.
5. I undertake to submit progress reports if required.
6. I am aware of my responsibility to be up to date and comply with the requirements of the law and relevant guidelines relating to security and confidentiality of patient or other personal data, including the need to register when necessary with the University's Data Protection Controller (further information available via <http://ris.leeds.ac.uk/ResearchDataManagement>).
7. I understand that research records/ data may be subject to inspection for audit purposes if required in future.
8. I understand that personal data about me as a researcher in this application will be held by the relevant RECs and that this will be managed according to the principles established in the Data Protection Act.
9. I understand that the Ethics Committee may choose to audit this project at any point after approval.

Sharing information for training purposes: Optional – please tick as appropriate:

- I would be content for members of other Research Ethics Committees to have access to the information in the application in confidence for training purposes. All personal identifiers and references to researchers, funders and research units would be removed.

Principal Investigator

Signature of Principal Investigator:



(This needs to be an actual signature rather than just typed. Electronic signatures are acceptable)

Print name: C L Castle

Date: (29/12/2015)

Supervisor of student research: I have read, edited and agree with the form above.

Supervisor's signature:



(This needs to be an actual signature rather than just typed. Electronic signatures are acceptable)

Print name: Dr Alinka Greasley

Date: (04/01/16)

Appendix C: Key terminology and definitions

Age-related macular degeneration (AMD)

The primary cause of severe visual impairment in the UK. The condition affects the macular, an area near the centre of the retina, leading to distortion or loss of vision in the centre of the visual field. The condition is painless and primarily affects elderly adults. In addition to age, macular conditions may also occur due to trauma, inflammation or a comorbid disorder.

Blind

An alternative term denoting a level of visual impairment equivalent to ‘severely sight impaired’. Individuals who are blind may have no vision at all, or they may retain a small amount of non-functional vision (see below for definition of ‘Functional vision’).

Cataract

The leading cause of severe sight impairment globally. Often an age-related condition resulting from gradual changes to the lens which may result in cloudy or washed out sight, difficulty seeing details without additional lighting, and glare from bright lights.

Congenital

A condition (or disease) existing from birth or developing before birth.

Cross-modal plasticity

A term used to describe the process whereby regions of the brain typically used to process one type of sensory information might be used to process another type of sensory information; this process is typically associated with sensory deprivation.

Degenerative eye condition

A condition which causes progressive sight loss. Sight loss may occur over months or years and the rate at which sight is lost may depend on the condition itself, and multiple other factors.

Diabetic retinopathy

A condition occurring in individuals who have diabetes, resulting from damage to blood vessels in the retina, caused through high blood sugar levels. Vessels may leak or haemorrhage, leading to distorted vision and at an advanced stage, abnormal blood vessels may grow on the retina, resulting in scarring and cell loss.

Early-onset

Term used to describe the onset of a visual impairment early in a person’s life. The exact age to which this term has been applied is inconsistent (see Section... for discussion) but in the current thesis ‘Early-onset’ is used as an umbrella term to describe both those with a congenital impairment, and those with a visual impairment which occurred before age of 12 years.

Functional vision

Refers to the residual vision that a person with a visual impairment maintains. This vision is ‘functional’ as the individual is able to use this vision in daily life.

Glaucoma

A group of conditions which cause damage to the optic nerve. The condition is often associated with high levels of intraocular pressure (which may cause pain), but low-tension glaucoma may also occur. Glaucoma may cause sight loss and inflammation of the eye. Risk factors include age and genetic predisposition.

Late-onset

A visual impairment which occurred later in life than an early-onset impairment. Once again, the time at which a visual impairment is deemed as late-onset varies in the literature but in the current thesis ‘late-onset’ denotes a visual impairment with an onset after the age of 12 years.

Partially sighted

Term denoting a visual impairment that is less severe than a ‘severe impairment’ (blind). The term sight impaired or visually impaired is used in the current thesis in place of ‘partially sighted’, reflecting the current terminology used in the certification process.

Retinitis pigmentosa

A group of inherited conditions which affect the retina. A degenerative condition which may result in reduced peripheral vision and difficulties seeing in dim light or in the dark. Central vision may also be affected, including difficulties seeing colour, reading or watching television.

Retinopathy of prematurity (ROP)

A condition occurring when retinal blood vessels don’t develop normally in premature babies. Due to a lack of oxygen to the retina, irregular blood vessels may develop on the retina, resulting in scarring, and potential detachment of the retina. Excessively high levels of oxygen given to premature babies may increase the likelihood of ROP.

Rod and cone dystrophy

A range of genetic conditions which affect the rod and cone photoreceptors (light sensitive cells in the retina). These conditions may be stationary (same level of sight from birth or early childhood) or progressive (sight is lost over time). Symptoms may include difficulty distinguishing colours, central sight loss, reduced visual acuity, and difficulty seeing in dimly-lit or dark conditions.

Severely sight impaired

Term denoting a visual impairment equivalent to ‘blind’, certified as such if sight loss meets one of three criteria when wearing any glasses or contact lenses needed: visual acuity of less

than 3/60 with full visual field; visual acuity between 3/60 and 6/60 with severe reduction of visual field (e.g. tunnel vision); or visual acuity of 6/60 or above with a very reduced field of vision (see below for definition of ‘Visual acuity’).

Sight impaired

Term denoting a visual impairment equivalent to ‘partial sight’. A person may be certified as such if, when wearing any glasses or contact lenses needed, they 1) have visual acuity of 3/60 to 6/60 with a full visual field, 2) have visual acuity of up to 6/24 with a moderate reduction in visual field or with a central part of vision that is cloudy or blurry, 3) they have visual acuity of 6/18 or better but a large part of their visual field is missing (see definition of ‘Visual acuity’).

Snellen test

A test of visual acuity which requires individuals to read letters from the rows of a chart, which get smaller as they progress down the chart. On the Snellen scale, normal visual acuity is called 6/6, which corresponds to the bottom or second bottom line of the chart. An individual who can only read the top line of the chart has a visual acuity of 6/60: they can see at 6 metres what someone with standard vision can see from 60 metres away.

Typically sighted

Term used to refer to someone who has a ‘normal’ level of vision (visual acuity 6/6).

Visual acuity

The level of a person’s central vision, their ability to see detail, measured by score on Snellen test (see ‘Snellen test’).

Visual field

The area in which objects can be seen in a person’s peripheral vision as they focus on a central point. A visual field test measures the horizontal and vertical range and sensitivity of a person’s vision.

Visually impaired

A term used throughout this thesis to denote an individual with some form of sight impairment, either (partially sighted) or severe sight impairment (blind).

Appendix D: Focus group schedule

ENGAGEMENT QUESTION:

1) Could you introduce yourself and give a brief summary of how you engage with music from day to day?

EXPLORATION QUESTIONS:

2) Could you talk to me about the role that music plays in your life?

Cues

- At what point during the night might you listen to music and why is this the case?
- Could you talk to me through some of the ways that you might use music during your daily life?

3) Could you talk to me about any occasions where you have felt that you would have liked to access some music or a musical experience, but haven't been able to?

Cues

- For example, attending an event, purchasing music or using a piece of technology to listen to your music collection?
- How do you think that sight loss may have impacted your access to music or musical experiences? (Perhaps you don't feel this is the case?)

4) Could you tell me how you might approach the tasks of...

- **Purchasing new music**
- **Attending a live music event**
- **Getting involved in music making** (Perhaps someone could tell me how they first heard about the singing group here at the centre?)
- **Could you talk to me about your use of technology to access music?** (What types of technology does the group use; could you talk to me about how you put together and access your digital music libraries)

5) Could you describe to me any barriers you have encountered when trying to access music or a musical experience?

Cues

- Purchasing new music
- Attending live music events
- Getting involved in music making
- How is technology helpful or unhelpful as a means of accessing music?

6) Could you talk to me about any sources of help that you have used to access music or a musical experience?

Cues

- If you had a query about a new device you had acquired to listen to music, what process would you go through in order to get an answer?

- Who might you ask to help with organising attendance at a musical event?

7) How available do you feel information about accessing music and musical experiences is to visually impaired people?

Cues

- Technology
- Live music events
- Could you describe any times where you would have liked to have been given more information, or able to access more information yourself? (About an event, a masterclass, an opportunity to perform, a new piece of technology, a musical performer or artist?)

8) How important is music to you?

- Could you tell me about any musical experiences that have held particular importance to you?
- Could you describe to me any differences you think there are between how you experience recorded music and live music?
- How do you think performing music effects the way you engage with music in your daily life?

EXIT QUESTION:

9) Is there anything else that you would like to mention with regards to your musical experiences?

And does anyone have any questions for me?

Appendix E: Semi-structured interview schedule

Part 1- Everyday musical engagement and “breaking the ice”

Could you give me an overview of how you engage with music on a typical day?

- Typical listening behaviours
- Level of engagement
- Functions of music

Part 2- Musical life

Could you talk to me about the role that you see music as having in your life overall?

- Functions of music
- Music across the lifespan (changes and similarities over time)
- Taste and preferences
- Memorable experiences with music

Part 3- Technology & Accessing music and information at home

Could you describe to me how you typically access music at home?

What is/are your preferred method/-s of accessing... at home?

- Your music collection (physical copies, digital libraries, song lists)
- New music (downloads, video hosting, streaming, websites)
- Information about new music
- Information or tickets for events (if applicable)

Follow-up questions

- *Could you tell me why this method of accessing music/information is preferable?*

This could include...

- Merits of different portable devices
- Factors relating to accessibility
- Mainstream V Assistive
- Any limitations

[Practical demonstration] *Could you talk me through how you would use [preferred technology] to access...*

- Your music collection (if they have one)
- New music (physical copies, digital access, websites, downloads, video sharing, streaming)
- Information about new music
- Information or tickets for events (if applicable)

Follow-up questions

- *Could you talk about how accessible you find...?*
- *Could you name any types of technology which you choose not to use, why is this?*

Part 4- Access to live music

Could you describe to me your most recent live music experience?

Could you talk me through how you organised your attendance at this event?

I wonder if you could talk to me about some of the positive and negative aspects of this experience, in relation to

- The venue
- The music
- The programme/written information
- Booking/collecting tickets
- Physical barriers and travel
- Staff and attitude
- Other attendees
- Overall experience

To what extent do you think this event was accessible to you?

Could you describe to me any other memorable live musical experiences? What was it about these experiences that made them memorable?

Has there ever been an occasion where you would have liked to attend an event but were unable to do so. Why was this?

Could you reflect on any ways that you think access to live music could be improved?

Part 5A- Beliefs and preconceptions, “Blind musicianship”

On reading into the topic, it is apparent that throughout history, there have existed longstanding traditions of blind musicianship, which may be reflected in recent decades by the rise to fame of a number of visually impaired musicians and artists. In short, this widespread belief assumes an association between having a visual impairment, and having enhanced musical abilities.

Could you describe to me your view on possible associations between visual impairment and musicality?

Follow-up questions

- *Could you describe to me any experiences which have led to this opinion?*

Part 5B- Beliefs and preconceptions, Auditory processing

A number of studies provide evidence that auditory processing abilities may be significantly better in those who are visually impaired compared to those who have typical sight. This is most apparent in those who have grown up with a visual impairment.

[Questions differ depending on the nature of the visual impairment]

Questions for congenital/early-onset VI participants

Could you tell me whether or not you believe the association between having a visual impairment and having greater auditory processing abilities, or listening abilities, holds true for you?

Follow-up questions

- *Could you describe any instances in which this association has been evident in your experiences?*

- *Could you reflect on the extent to which you believe having a visual impairment impacts on the way you engage with music?*
- *Could you reflect on the extent to which you believe having a visual impairment impacts on your enjoyment of music?*

Questions for late onset VI participants

Could you tell me whether or not you believe the association between having a visual impairment and having greater auditory processing abilities, or listening abilities, holds true for you?

Follow-up questions

- *Do you think there has been any change to the way that you hear and process sound as a result of having a visual impairment?*
- *Could you reflect on the extent to which you believe your visual impairment has impacted on the way you engage with music?*
- *Could you reflect on the extent to which you believe your visual impairment has impacted on your enjoyment of music?*

Part 6- Reflecting on the importance of music

Could you tell me about an occasion when you felt music was especially important to you?

Could you reflect on the level of importance that music holds for you?

Part 7- Closing question

Is there any aspect of musical life which you would like to talk about that we haven't covered in our discussion?

Appendix F: Study 1 verbal information sheet

Verbal information sheet

I am Claire Castle from the School of Music at the University of Leeds and I am conducting a research study on the musical experiences of blind adults and adolescents in the UK, as part fulfilment of a PhD degree. The research will help me to understand the role that music plays in daily life for people with a severe visual impairment and will help me to identify where access to music may need to be improved, and how this could be done.

Today, you will be participating in a focus group which will take approximately one hour to complete. The sessions will consist of discussion with fellow participants, led by me, the researcher. Your participation is entirely voluntary and if you wish to cease participation, you may do so at any time. Responses will be audio recorded for transcription at a later time, but all data will be stored and written-up anonymously using pseudonyms. Data gathered today will be stored and backed-up in a secure location and I will only use it for purposes relating directly to the research aims, but it may be accessed at a later time for use in relevant future research.

Please note that during the focus group session I will not be able to guarantee confidentiality because we will be discussing topics as a group. Therefore, if you feel at any point that contributing to the discussion would make you uncomfortable, please do not feel obliged to do so. Following the focus group session, I will provide you with a short debrief.

I will provide you with a paper copy of this information sheet for your records today, but if you would like a digital copy to access at home, please let me know so that contact details may be taken, and a copy emailed to you.

If you have any questions regarding the research or your participation, my email address is as follows, mc13clc@leeds.ac.uk.

Appendix G: List of codes and themes identified during Study 1.

<p>1) Importance of music for VI individuals 1.1) Sensory experience (auditory, vibratory) 1.2) Comparisons with sighted listeners</p> <p>2) Impact of VI on engagement with recorded music 2.1) Accessibility of written information 2.2) Accessing new music 2.3) Accessibility of download sites 2.4) Use of technology</p> <p>3) Impact of VI on engagement with live music 3.1) Idiosyncrasies of impairment 3.2) Psychological/psychosocial barriers 3.3) Interrelating factors 3.4) The physical environment 3.5) Venue accessibility and accommodations</p> <p>4) Impact of VI on music making 4.1) Difficulties learning an instrument 4.2) Difficulties reading music 4.3) Loss of abilities or opportunities</p> <p>5) Accessing help and information 5.1) Reliance on others 5.2) Word of mouth 5.3) Difficulty pinpointing sources of information 5.4) Radio</p> <p>6) Self-regulation 6.1) Mood regulation 6.1) Emotional responses 6.3) Relaxing 6.4) Energising 6.5) Therapeutic properties</p> <p>7) Occupation 7.1) Job opportunities 7.2) Musical engagement through vocation</p> <p>8) Music as an accompaniment to life 8.1) Travel 8.2) Housework and chores 8.3) Academic work</p>	<p>8.4) Physical exercise 8.5) During other leisure activities</p> <p>9) Memories 9.1) Autobiographical memories 9.2) Making memories 9.3) Music, memory and dance</p> <p>10) Social 10.1) Engagement through friends and family 10.2) Bringing people together 10.3) Friendship</p> <p>11) Accessible hobby 11.1) Break from visual activities</p> <p>12) Cognitive and spiritual 12.1) Thinking and learning about/from music 12.2) The spiritual or creative journey</p> <p>13) An event 13.1) Special occasions 13.2) Making the mundane an event</p> <p>14) Preferences 14.1) Likes 14.2) Dislikes 14.3) Reasons for liking 14.4) Reasons for disliking 14.5) Age differences 14.6) Breadth of preference 14.7) Importance of variety 14.8) Function and preference interrelated</p> <p>15) Additional factors influencing musical engagement 15.1) Adaptation to impairment 15.2) Mobility and additional disabilities 15.3) Cost 15.4) Transport 15.5) Family 15.6) Time limitations 15.7) Other commitments</p>	<p>16) Engagement 16.1) High level 16.2) Low level 16.3) Changes over time 16.4) Types of musical activity</p> <p>17) Making music 17.1) Learning instruments 17.2) Formal musical training 17.3) Ensemble singing/playing 17.4) Performing</p> <p>18) Technology 18.1) Types of technology 18.2) Assistive technology 18.3) Accessibility 18.4) Level of technological engagement 18.5) Age differences 18.6) Attitudes towards technology</p> <p>19) Music collections 19.1) Physical collections 19.2) Digital libraries 19.3) Shuffle and playlists 19.4) Subscription services, video streaming and television</p> <p>Free nodes Enjoyment Lyrics Description of visual impairment Dynamics of music No impact of VI on engagement</p>
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Appendix H: Sample recruitment email for Study 2

Call for participants with a visual impairment to take part in an informal interview with a researcher from the University of Leeds

I am a postgraduate researcher from the University of Leeds, studying for fulfilment of a PhD. As part of this process, I am inviting participants with a severe visual impairment (registered blind) to take part in a one-to-one interview to discuss their personal perspectives on the role of music in their lives, and to demonstrate their approach to accessing music in daily life. Interviews will be carried out in the homes of participants and will last approximately 45-60 minutes. Participants must be aged 18 years or over.

These interviews make up the second in a series of studies aimed at investigating the role of music in everyday life for blind adults in the UK. It is hoped that participation in this stage of the research will be a rewarding experience, offering the opportunity to share with the researcher personal experiences and concerns, and discuss issues important to them.

Participants with a variety of musical or non-musical backgrounds are welcome, including those who feel that their engagement with music is minimal; a range of perspectives is essential to meeting the research aims.

To find out more about the study, or to register your interest in taking part, please email me at mc13clc@leeds.ac.uk.

Many thanks,

Claire Castle

University of Leeds.

Appendix I: Information sheet for participation in interview study

This research is being conducted by Claire Castle from the School of Music at the University of Leeds, as part fulfilment of her PhD degree. The research project is exploring music in the lives of adults and adolescents (aged 16 years and over) living with visual impairments in the UK. The research aims to contribute knowledge regarding the everyday musical experiences of this group, and will investigate the accessibility of music, information and events for those who have a visual impairment.

The project is comprised of three studies. The first study was a series of semi-structured interviews carried out with participants with visual impairments in April and May 2016. These focus groups provided initial information regarding the perceived importance and functions of music, and the challenges and benefits of accessing musical experiences, be it using technology at home, or attending a live concert.

The second study will be a series of semi-structured interviews, carried out with a small number of participants living with a visual impairment. Wherever possible, these interviews will be carried out by the researcher in the homes of participants. Interviews will last approximately 45 to 60 minutes. During the interviews, a variety of topics will be discussed, including everyday engagement with music, how you use music, technology use, live music event attendance, and beliefs relating to musical life and visual impairment. You may be asked to demonstrate and talk-through the physical process of accessing music or information at home. Please note, interviews will be audio recorded for transcription at a later time, but all data will be stored and written-up anonymously using pseudonyms.

If you feel unable to take part in this stage of the research but think you might like to get involved in another way, the researcher plans to disseminate a UK-wide survey later in 2017. This will offer a means of exploring the topic on a much wider scale and will allow a much greater number of individuals to get involved in the project. If you would like to be involved, please pass on your contact details to the researcher via the contact details given below. Please state your interest in the survey study.

If you have any questions about the research project, the interview study, or would like to show your interest in being an interview participant, please email me at mc13clc@leeds.ac.uk.

Appendix J: Participant biographies

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Adam (37 years)

Adam was the brother of interview participant, Mike. Like his brother, Adam had a form of Retinal Dystrophy, which meant that he had been born with some sight but had experienced a gradual deterioration in vision. He had also developed cataracts, one of which had been removed just before the interview. Like Mike, Adam struggled to read paper-based text, so he accessed written materials digitally, using high contrast settings. Adam also commented on the challenging nature of changing light conditions, such as walking into a cinema, and similarly, walking into bright conditions from a dark environment; both required a lengthy period of adjustment for his eyes. Also, being short-sighted meant that social interactions were a challenge, as he was unable to recognise faces beyond a few metres. Adam acknowledged his efforts to his impairment from others and preferred not to discuss it unless necessary. Being a Music Technology lecturer at a college, a position he had held for ten years, had made this particularly challenging due to the inquisitive nature of students and the noticeable alterations to his computer screen. Prior to teaching as a college lecturer, he had taught English, Maths and IT to adult students, and undertook work in a web and graphic design following the completion of his university degree in Music Technology.

Adam was a keen musician and considered music to be a large part of his life, as both a performer and a listener. He had learned the piano as a child, and took up the guitar aged thirteen, encouraged by a friend who wanted to start a band. Playing in this band became a large part of Adam's childhood, and the group began gigging when he was fifteen. Adam had received a small amount of tuition on the guitar but was largely self-taught. He had continued to perform as a part-time professional musician in a band until recently, when the challenge of balancing a full-time job, family, and weekend performances became too difficult. Adam missed this aspect of his life, although he performed occasionally and hoped to do so more regularly in the future, without having to commit to missing out on time with his family at the weekend. In addition to music, Adam enjoyed gaming and listening to audiobooks, and was busy at home with two young children.

Alice (28 years)

Alice was born with bilateral cataracts and glaucoma. She visited an eye hospital at the age of one and a half and underwent surgery which left her with an infection in her right eye, resulting in a complete loss of sight in this eye, and the subsequent fitting of a prosthetic eye. Over the years, this infection spread to Alice's left eye, and she eventually had to have this eye removed. Contrary to this being a loss to Alice, she acknowledged feeling better for having had the second eye removed as the infection had caused her great pain; she could now live her life 'normally'.

Alice was a cane user, although because of additional balance and mobility problems, she preferred to have a sighted guide. Alice had identified herself as a professional singer who had been working as such for around two years at the time of our interview, although having recently moved to a new area, she was not currently engaged in performing. Alice had moved to a city 'to be closer to things', originally having lived in a small, rural village. Alice hoped to receive further vocal training with a professional teacher and begin performing at open mic nights. She also hoped to receive training in composition software and was already looking into the possibility of applying to music colleges to further her vocal development. In addition to Alice's love of performing, music also held importance as a means of coping with mental illness; Alice had borderline personality disorder, as well as symptoms of other mental health conditions. Traditional psychotherapy and counselling had not proven successful, but Alice found listening to, and playing music, offered some therapeutic relief. She was in the process of self-referring for professional music therapy, and in fact, one of her long-term career goals was to become a music therapist to help others through music.

Alison (52 years)

Alison was born with a visual impairment resulting from glaucoma. She maintained a very small amount of sight which meant she was able to see things close-up but had poor distance vision and struggled to recognise people at any distance. Alison was a Brailist and described herself as fully independent and very 'used to being a visually impaired person'. Alison attended a specialist college and in working life, was employed by a college for visually impaired students, as well as taking on work transcribing materials into Braille.

Alison was not an instrumentalist, but she spent a lot of time listening to recorded music and considered music to be one of the most important things in her life. In addition to music, Alison enjoyed walking in the countryside and led walks with various rambling groups. She learned the walks, transcribed them into Braille, and then followed the Braille instructions to lead a group of walkers; walks could be up to 11 miles long. In everyday life, Alison made use of a cane to move about public spaces safely, although walking in the countryside required her to seek assistance from other walkers to make her aware of any obstacles ahead of her. Socialising and family life were important to Alison, and she described her family as 'close-knit'. She had four sisters and both of her parents were still alive, although her father spent a lot of time abroad, in his home country. Alison commented that her family was not particularly interested in music. She had attempted to introduce her sisters to some of the music that she enjoyed, particularly classical pieces, but had not had much success in capturing their interest.

Ben (38 years)

Ben was born with congenital cataracts, meaning that his corneas had gradually deteriorated as he got older. Ben had some sight during his childhood but was told that at some point during his teens this sight would be lost. Despite various surgeries, his vision deteriorated during his childhood and, at the age of eighteen, he lost his remaining sight, which he described as ‘someone switching off the telly... the light just suddenly kind just *snaps fingers*’. Ben’s parents struggled to cope with his impairment, which he believed was due to a lack of adequate support; this had a direct impact on his development of everyday life skills, essential for independent living. Ben’s parents had tended to do things for him, and he was quite dependent on them during his school career. Even at eighteen, when Ben left to attend a college for students with visual impairments, he still relied heavily on them, only learning how to carry out tasks such as making a bed and cooking once at college. Ben did not enjoy his experience at college and felt unable to pursue his interests here. He returned home within a year, before applying to another specialist college and completing a course in Music Technology.

Ben considered music to be an important part of his life, and he was a co-host and producer for an internet radio station alongside his friend, who also had a visual impairment. Ben’s exposure to music during his childhood had been somewhat limited due to his Islamic upbringing; he described his mother’s beliefs that he could ‘get possessed by the devil when I listened to music’. Ben did not share such beliefs. Music listening had been important when Ben was growing up, as a means of airing his frustrations, and it remained part of his daily routine. In addition to music listening, Ben had played percussion in the past, as a member of a drum class run by an organisation supporting visually impaired members. This class had ceased to exist and as a result, so had Ben’s music making.

Eleanor (53 years)

Eleanor, wife of James, had been visually impaired since birth. She maintained a small amount of light perception. At the time of our interview, Eleanor had a guide dog, which was a huge help to her. However, I was informed some time after our interview that Eleanor's guide dog had been retired and she had been on the waiting list for a new guide dog for over a year.

Eleanor was originally from Germany and went to school and university in Hamburg. At university she studied special educational needs teaching. Eleanor did not enjoy university. Eleanor reflected on the difficulties of attending university as a visually impaired person during the eighties and nineties, a time at which she believed students with additional needs were not well supported. She described her time at university as a 'very lonely experience'. Eleanor finished her degree course but did not go on to teach. Instead, she focused on developing contacts in an English-speaking country to help her to pass her English exams and improve her employability. At this time, Eleanor moved to Glasgow, and then to London, where she found work and met James.

Eleanor had been a member of various choirs throughout her school and university education. Following university, she had joined choirs in London and then her current home town, but she was not currently a member of a choir. She put this down to it all getting 'a bit too sort of stuffy for me' but she hoped that she would find a suitable choir to join in the future. Eleanor also talked about the couple's past engagement with live folk nights, in which Eleanor had performed as a flutist. Eleanor had begun learning the flute as an adult, having been forbidden, by her parents, to learn the instrument as a child. Eleanor described their attendance at folk evenings as a 'phase', although they had returned more recently when a friend had visited, purely for the social atmosphere that these evenings offered. In addition to live folk evenings, Eleanor and James were regular attendees at a classical music venue in a nearby city, which they travelled to by train; they praised the venue's accessibility.

Emily (42 years)

Emily had been visually impaired for her entire life. She had some functional vision when she was a young child but had experienced tumours in her eyes (Retinoblastoma) which led to her deteriorating sight. Her vision was better in her left eye than her right, and she had enough sight to read written materials using magnification on a computer, although she used voice-over when using her iPhone.

Emily attended a mainstream, Welsh language primary school, spending two mornings a week at an additional educational needs school, where she learned to read Braille. Emily then attended a mainstream, Welsh language secondary school. Emily's parents were teachers and worked alongside her teachers and the education authorities to ensure proper support. Emily had a support worker for a few hours a week at school; Emily commented that this made her feel 'rather separate' from other students and friends. However, apart from PE, Emily enjoyed school and made a lot of friends. During her school education, Emily took-up the harp, having already begun to learn the piano. Emily happily agreed with associations made between Wales and musical heritage, and she also believed that growing up in a musical family had significantly contributed to her musical interests.

Emily went on to study law at university, followed by a Master's in politics. She began a legal practice course but after working for a firm for six months, which suddenly closed-down, she found work in broadcasting research. In her working life, Emily had part-time support workers to help her get to events and to assist her with administrative tasks.

Emily had an adventurous attitude to life. She had been made redundant around 7 months prior to the interview and had taken this as an opportunity to travel. She went to Australia for six weeks to stay with a friend but spent time exploring by herself. Although she recognised certain limitations due to her visual impairment, she had embraced the new experiences and activities. Emily was about to start a new job as a communications officer for a charitable organisation.

Emily was currently engaged with music in a variety of ways, including listening, choral singing, and attending live events. Emily also attended club nights and spoke about her love of dancing and being able to 'lose herself' at these events. In addition to enjoying music, Emily also enjoyed listening to books and attending non-musical productions, such as plays.

Greg (61 years)

Greg had dual-sensory loss; he had advanced Retinitis Pigmentosa and now wore two hearing aids. He attended mainstream school, becoming partially sighted during his early twenties; Greg observed that reading classical piano music had become difficult at this time. He then became interested in playing other styles of piano music and over a period of about 20 years, developed his own style of improvisation and composition at the piano. Greg was registered blind in the mid-eighties.

Greg identified himself as a semi-professional musician, involved in work as a performer, composer, and improviser. He also contributed musically to local charitable groups, as a performer and workshop leader, and is an active member and committee member of various organisations for sensory and dual-sensory loss. Greg was currently the lead pianist for a national orchestra whose aim is to provide opportunities for adults with learning disabilities to engage in music-making and concert performances. As a musician with dual-sensory loss, Greg had developed ways of playing as part of an orchestra. As he observed 'it's very difficult because I can't see the conductor for facial gestures or using the baton to point to me when we're rehearsing'. Greg made use of Social Haptic Communication in rehearsals and performances, whereby a music assistant sitting next to him uses her fingers to provide meaningful gestures to communicate information immediately from the conductor to his upper arm in a tactile form, especially during rehearsals.

In addition to playing music, Greg practiced yoga and transcendental meditation as a means of coping with stress; Greg believed that his dual-sensory loss had contributed to the 'tremendous amount of extra stress that I have'. Music listening, especially in the Baroque style, also played a central role in Greg's life as a form of relaxation. In addition, he had developed a Baroque style improvisation and now plays harpsichord to entertain visitors at two museums.

Hayley (53 years)

Hayley had been born prematurely at 7 months, and oxygen levels in her incubator had damaged her optic nerves (Retinopathy of Prematurity). Hayley's mother had been told that Hayley may have disabilities additional to her visual impairment, but this was not the case. In Hayley's own words, 'I'm damned lucky to be here'. Hayley grew up with parents who instilled in her 'the gift of total positivity'. She attended a specialist school for students with visual impairments, which she viewed as positively impacting on her education and development, but she also commented that she had been extremely homesick. Following school, Hayley attended a specialist college for visually impaired students, before finding secretarial employment and meeting her then husband. The couple had two children, and following their divorce, the pair remained friends.

Hayley does a lot of charitable work and had previously been employed as a Braille transcriber by one organisation supporting visually impaired members. However, Hayley was made redundant, and she now partakes entirely in voluntary work.

Hayley played the keyboard occasionally and had received instrumental tuition in the past, although she acknowledged that she found playing quite hard work. She regularly listened to music, and now that her children were adults, she felt that she had more time to enjoy doing so. Music was an important part of Hayley's life, and whilst she also enjoyed reading, music was a permanent fixture in her everyday routine.

Henry (80 years)

Henry had been blind since birth. He read both literary and musical Braille, the latter of which he had started to learn at the age of eight. It was at this time that Henry had his first piano lesson. Henry's early playing was focussed on classical music; he recognised that at this age he had been 'serious minded' and it wasn't until Henry attended a specialist college and met another student, who was a jazz improviser, that he gained a basic understanding of popular styles.

Soon after leaving college, Henry met Sandra, who later became his wife. At that time, Sandra was performing in pubs with her friends and Henry had started work as a typist. The couple soon began playing music together; Sandra played the accordion and Henry played the piano. When they got engaged, they started performing together in pubs over the weekend, whilst holding jobs as typists during the week. The pair bought their first house together and had three children. Even then, they continued to work most weekends. Eventually, the couple set up their own band, employing a drummer with a car who was able to get the trio to their bookings. The band received so many requests that the couple began working as an agency, finding other bands to take on surplus work. The couple retired in 1986 and began spending their time travelling the world.

Today, Henry continued to play the piano, although he played far less than in previous years. Henry had experienced some recent health problems, which had led to him undergoing heart surgery; his stamina for playing was much less than before his operation. Henry also recognised that as an elderly player with reduced dexterity, playing had become more difficult. Despite the physical challenge, Henry considered reading music and learning new pieces an important mental exercise, 'because you've got to decode the Braille music, and then play it'. He was currently several months in to learning to play a series of variations; he had mastered the theme and first variation but was now struggling to play the second variation. Henry also spent time listening to music and enjoyed deciphering how to play the music that he heard.

Jack (57 years)

Jack was born with no sight, but hospital visits during his infancy had gained the sight back in his left eye. As a result of glaucoma brought on by congenital cataracts, Jack had to have his right eye removed and replaced with a prosthetic. Conditions affecting sight loss run in Jack's family and his father, Henry, also took part in the interview study.

Jack was involved in several charitable organisations. His roles included being an events manager for two local sports and social clubs for visually impaired members and working with the charity National Talking Express (a magazine distributed in accessible forms for blind and visually people). Jack was also involved musically with his local church, playing the organ for hymns during church services and choir practices, and he was also a committee member for the specialist school that he had attended as a child. It was at school that Jack had learned to play the piano, recorder and drums; his piano teacher noticed early on that Jack had perfect pitch. Whilst at school, Jack attained a Grade 6 piano certificate, and was working towards his Grade 7 exam when he left school. Jack continued to play the piano at home recreationally, and in preparation for choir practices. Jack read Braille music and had gained a Grade 8 theory certificate. At school, music became an important part of Jack's weekly activities. He became involved in the school band as a drummer, performing at various parties and gigs. Later, Jack was a member of his family's band. His parents had previously performed as a duo, but this evolved into a full family line-up. The band had performed on television and took bookings all over their local region at weddings and other formal events. Following this, Jack and his brother performed together as a duo for nearly two decades, before bookings began to dwindle. In his working life, Jack worked in business energy and industrial strategy for the government, in a public facing phone role. Jack's wife had died only a few months before our interview.

James (55 years)

James was born with congenital cataracts which had left him with a small amount of sight. However, he then developed glaucoma, a condition which led to a gradual deterioration in his sight; he had lived with his current level of sight since around the age of 12 years. James still retained a very small amount of light perception, but his vision was not functional.

James attended specialist schools for visually impaired students and he was a competent Brailist. He also attended a college for students with visual impairments, where he finished his O levels and A levels. On the topic of specialist schools, James had mixed feelings, commenting that 'socially it was crap, horrible, it was an all-boys school and it was horrible, but academically it was really good'. Following college, James attended university, graduating from a four-year degree course in Computer Science with First-Class Honours; this course included a year in industry. James commented that he had really enjoyed the university experience, and he quickly gained a job relating to his degree soon after leaving university. He currently worked in IT although, at the time of the interview, expressed that he hoped to retire soon. James was married to Eleanor, another interview participant in this study. They had met in 1996 at a conference for a sight loss charity.

Jim (84 years)

Jim was severely sight impaired. As a child, he had a squint which had been rectified early on, however he developed measles, which affected his eye sight (he maintained better sight in his left eye at this time). Jim went through surgery on his left eye to improve his vision, which was successful, but returned to hospital the following month for surgery on his right eye, which was not successful; Jim's parents were advised to allow doctors to remove the eye, which they agreed to. Following this incident, the sight in his remaining eye gradually improved and he experienced many years of relatively easy movement, although he struggled to read print. However, aged 47, Jim had an eye infection and his sight gradually deteriorated. At this point, he began to bump into things when walking out-and-about. Three years later, Jim applied for a guide dog and received one within 6 months; this helped greatly with his mobility and he still has a guide dog today. His sight continued to deteriorate slowly. In 1988, Jim had further surgery which was extremely successful, he commented that 'I could see brilliantly'. However, following a collision with an overhanging branch on a pavement, he completely lost his sight due to irreversible retina damage; this was just 7 weeks later. Given the option to have this eye removed, he chose not to and had a shell fitted over his eye instead, in the hope that he might gain some sight back. However, he had since accepted that any improvement was unlikely.

Jim was an avid music listener and music was an integral part of his daily routine. He also attended classical music concerts on a regular basis. Jim had grown up surrounded by music, attending a school for visually impaired pupils where he started learning to play the piano. He also briefly spent time learning the organ, although this was short-lived. Even at this time, Jim took every opportunity to attend music concerts, and eventually, his mother bought him a piano to play at home. Jim had this piano in his home throughout his life, although after downsizing, the piano had been removed and he not played since.

John (38 years)

John described himself as ‘totally blind’. He had a background in sound engineering and had been involved radio broadcasting. He had previously been a DJ on a pirate radio station and spoke fondly of the feeling of reaching out to others through this work. John had a diverse range of hobbies, including swimming, falconry and wildlife sound recording.

John began his education at a school for students with visual impairments, but as this school only took primary age pupils, he left to attend a boarding school a few years later. John described life at boarding school as ‘a really hellish experience’ and after a few years, his parents removed him and returned him to his first school, which had begun to take on older pupils. During his final years of school, in which John completed his GCSEs, the school attempted to integrate John and his peers into a mainstream school. However, John believed that this integration had been poorly planned, and he experienced bullying at the new school.

Following school, John attended a college for visually impaired students for a year and completed an IT course, although he wasn’t overly positive about the support he received. Next, he completed a radio production course set up for visually impaired learners, run by a community radio station, and then studied sound engineering for 2 years at a mainstream college. John found this college experience a positive one, and he noted that the college was proactive in ensuring that the course was accessible. John had attempted to gain experience on various stations and vocational courses, but had faced challenges, including difficulty accessing a portfolio of his work at one station (an obvious barrier to future employment).

John was not an instrumentalist at school, although he had attempted to play a few different instruments. John admitted that he lacked the dedication to stick at his playing. John’s current engagement with music revolved around his production work at church, and music listening. John had, within the last year, become a Christian, and he used his skills to oversee the sound production at his church’s services, working alongside speakers, vocalists and instrumentalists. He also listened to music at home, and particularly enjoyed engaging with his vinyl collection of techno and house music. Whenever possible, John attended live jazz events, which he viewed as both musical and social experiences.

Laura (45 years)

Laura had lived with reduced vision all her life, due to Retinitis pigmentosa, although she noted that she had quite a lot of functional vision until the age of fifteen. At this point she experienced a rapid deterioration in her sight over the space of around a year. She experienced a similar deterioration during her late teens and early twenties, when she had her first child. Laura had four children, three of which were adults and had no visual impairment, and one who was four and had unexpectedly presented with the same condition as Laura shortly after he was born. Laura commented that, perhaps due to hormonal changes, she would lose a little more sight each time she had a child.

Laura started her education in a specialist residential school, the school her mother had also attended. Her parents had hoped that Laura would attend a mainstream school but at the time it was a legal requirement to send all children who were deaf or blind to specialist residential schools. She did not attend the school for long, her parents deciding to home educate her.

Laura became a professional singer following her success in a televised Opera competition, which she won. Laura had grown-up within parents who were both unemployed, and as such engagement with music during her childhood, including attendance at concerts and music lessons, was quite limited. However, she had started playing the cornet when she was about nine years old and had joined a brass band age twelve, an activity which she continued throughout her teenage years. Laura began taking singing lessons from around the age of sixteen, which she was able to afford thanks to her own efforts securing sponsorship. Prior to becoming a professional singer, Laura had been a keen amateur musician, a full-time mum to her three children, and taught vocal tuition and music theory as a private tutor.

Laura commented that times of rapid deterioration in her sight were fraught with panic, as she would never know how much sight she would be left with, if any. She noted that in her view as a musician, being left with some remaining sight had been a very different experience than the one she'd have had if she'd been left with no sight. Laura did not read Braille music and relied on her residual sight to learn music via magnification. Laura worried that if she ever had to learn the Braille music system, she would have limited access to the music that she needed.

Lily (60 years)

Lily had acquired her visual impairment after her university education, although she had been short sighted during her childhood and wore contact lenses or glasses. At the age of 22, Lily's sight gradually began to deteriorate over about 6 months, beginning with a slight loss of visual field in one eye. Lily was told at this point that her visual impairment had been caused by a tumour which had damaged her optic nerve. As the tumour had not been picked up, the damage had already been done. The tumour was removed shortly afterwards, but Lily's sight continued to deteriorate in both eyes. At the time of the tumour Lily was able to read extremely large print, but she now has only a little vision remaining, which she described as, 'pretty useless'.

In her working life, Lily worked for voluntary sector organisations campaigning for improved rights and services for disabled people. Lily was also a disability officer at a local university, working part-time in this role. At home, Lily enjoyed gardening and growing vegetables. Lily was not an instrumentalist and acknowledged that she did not listen to a huge amount of music at home, with a lack of technological engagement appearing to be a contributing factor.

However, Lily had attended a great number of live events throughout her life and she regularly attended local live jazz events and the annual Cambridge Folk Festival. Lily also had a close friend with whom she enjoyed spending time talking about music and she had developed an appreciation for jazz through the influence of an ex-partner, who was a jazz musician.

Mike (41 years)

Mike was severely sight impaired due to Rod-cone dystrophy. Mike reported having low vision since birth and noticing, as a child, his inability to see in poorly lit conditions, which had become increasingly challenging over time and made getting around dark environments by himself an impossibility. His vision, even in well-lit conditions, had deteriorated substantially over the last 3 or 4 years, although he acknowledged first noticing this deterioration during his university studies. Mike also spoke about the impact of his impairment on engagement with written materials. Paper-based materials were inaccessible to him but, as someone who's impairment was contrast based, he benefitted from reading materials on a computer screen, so that he could alter the contrast, text colour, and font size.

Mike's sight was now at a level which required him to use a white cane at work to ensure independent mobility, although colleagues commented that before this, they had not noticed his impairment; he admitted that hiding his impairment was something he preferred to do 'from a pride perspective, I just like to be like everybody else'. Mike avoided using his cane outside of work, choosing instead to rely on his wife and children. Having stayed in contact with Mike after the interview, I learned that Mike had since received a guide dog and had become actively involved in raising awareness and funds for the UK charity Guide Dogs.

Mike considered himself to be a non-musician, although he had completed a music technology degree. His decision to do this course over a music degree was influenced by his interest in popular music, but also the fact that he could study at the same university as his older brother (Adam, also a participant in this study). Mike also commented on the influence of his father, who had been highly interested in music, on his own musical interests. Mike had been surrounded by music, and his father's vast vinyl collection, throughout his childhood.

Mike was married with two children and worked for an academic publishing company, which he acknowledged were extremely supportive of him. In addition to interests in music and technology, Mark was a football enthusiast, although he had stopped attending matches as his sight had made it increasingly difficult to follow the action on the field.

Natalie (49 years)

Natalie was the only interview participant who lived outside the UK. She lived in Wodonga, Victoria (Australia) with her husband. Natalie described herself as 'totally blind', having lost her vision at the age of 17 months as a result of a childhood cancer. She had attended mainstream schools, and apart from 2 years in the UK, had always lived in Australia. Natalie had a Bachelor's degree in Social Welfare, although had worked in this field very little and had primarily spent her working life as a home-maker, bringing up her two, now adult, children.

During Natalie's school education, music had been her main hobby. She had been involved in lots of music making and had learned to play several different instruments. Beginning with the descant recorder as a youngster, she learned some basic guitar during primary school, played the organ from about the age of twelve to seventeen, and played the clarinet throughout high school. Natalie was also involved in school musicals and sang in various church choirs; she still sang in her local church choir.

Robert (75 years)

Robert was born in Edinburgh. He had low vision from birth, due to Congenital Glaucoma, which Robert's mother believed had been the result of difficulties during birth. Robert had no remaining vision, having lost this at the age of three due to an accident during which he had run into a cupboard door. Robert was a literary and musical Braille reader.

Robert attended schools for students with visual impairment throughout his education.

Although most students at his school were boarders, Robert's family were local to the school and he was able to go home during weekends. At the age of 11, Robert began his education at a college for visually impaired students, before attending prestigious universities for his undergraduate and postgraduate degrees. Robert spent time as a university researcher, before beginning a 16-year period of teaching at a different university. Robert was now the director of a disability unit of his local council, although he had retired from paid work. Robert had been involved in various associations to support blind and disabled members throughout his life.

Robert had begun to learn Braille music at his first school, although he commented that since learning the system, it had gone through a series of changes and he felt he was less familiar with it now than he had been. He had also begun to learn the piano at school and had taken his Grade 6 examination. He had been working towards his Grade 8 certificate although did not get around to sitting the exam. Robert commented that he 'was never that good' but took pleasure in accompanying others. Robert did not currently play very much, which he put down to a lack of both time and motivation. Still, Robert was a regular attendee of live music concerts, and had made use of the RNIBs box at the Royal Albert Hall to attend as many BBC Proms concerts as possible.

Sophie (20 years)

Sophie was a second year Media Studies student. Sophie had been visually impaired since birth and retained only some light perception; she did not disclose the cause of her impairment.

Sophie had attended a mainstream primary school, with all of her educational adaptations and materials provided by her local visual impairment team. Sophie also attended a mainstream high school. In class, Sophie had a Learning Support Assistant and she also received mobility training and Braille lessons at this time. Sophie used a cane to move around in public, although she preferred to visit places that she was familiar with. She had begun using a Perkins Braille as a young child and had been provided with a Braille during her university studies; this allowed her to access physical copies of written materials (printed Braille), rather than always reading information from a screen.

Sophie was an amateur musician who enjoyed singing. She also spent time writing songs, which she inputted and recorded on her Braille Notetaker. Sophie had been engaged in song writing since her early teen years, an activity that she had shared with a childhood friend. The pair had performed together at school, but during her first year of university, her friend had sadly passed away. The death of her friend had been a set-back during Sophie's first year at university; she recognised that the experience had caused her to neglect the social opportunities available to her. As a result of this, Sophie felt that she had not had a typical experience of university during her first year, and it was only on returning to study in her second year that she realised that she had been missing out. In contrast she had, overall, had a positive academic experience and enjoyed her course, although she had sometimes faced challenges with regards to accessing written materials and had relied on signed course mates for help.

Since the time of her interview, Sophie had graduated with a First-Class Honours degree and hoped to set up her own business, helping visually impaired people access information and seek-out part-time employment.

Victoria (55 years)

Victoria had been registered as partially sighted since the age of 4 years. Victoria listed a variety of different eye conditions which had impacted on her sight throughout her life. She had been born with congenital cataracts, experienced detached retinas in her twenties, developed glaucoma in her forties and now had myopic macular degeneration, which developed in her late forties. Victoria approximated her sight during her school education to 'about half', and commented that at university, she had been unable to see the board. Her latest condition had had the greatest impact on her sight. Whilst Victoria had previously been able to disguise her partial sight from others, she now had to be more transparent about her sight loss; she commented that this change, which occurred around three four years earlier, had been difficult.

Victoria had been a primary school teacher in the past, but now worked for the council, in a team whose aim is to improve the quality of learning and development for children in the local area. Victoria's work meant travelling across her local area, which made mobility and navigation skills extremely important; she had received mobility training during the winter of 2015-2016. Before this training, Victoria had experienced a phase where she was fearful of going out in the dark on her own, but thankfully her confidence had grown. Victoria recognised her adjustment to her sight loss as one which would 'remain a continual process of adaptation because it's not stable... so yeah you're learning new things all the time'.

Victoria did not consider herself to be a musician, although she had played the piano during childhood and there was still a piano in her home. Victoria had attempted to return to the piano at various times throughout her life but felt that having a family had limited the time she had available for playing. However, Victoria remained interested in popular music, and regularly listened to music at home. Victoria also spoke about her love of books, and the impact of her visual impairment on her engagement with literature. It had been around three years since she had last able to read a book and she commented that she 'missed that dreadfully'. The ability to access audio-books had allowed her to revive her love of books despite deteriorating vision.

Appendix K: Study 2 sample verbal consent form

Verbal consent form to take part in a focus group for "An exploratory investigation into the music listening experiences of blind adults and adolescents in the UK"

To be read aloud by the researcher to the participant.

(Please add the initials next to the statements below with which the participant agrees)

I confirm that I have listened to the information sheet explaining the above research project and I have had the opportunity to ask questions about the project.	
I agree for the data collected from me to be stored and used in relevant future research in an anonymised form, and for the data I provide to be archived in the University of Leeds Research Data repository for use in relevant future research.	
I understand that relevant sections of the data collected during the study, may be looked at by auditors from the University of Leeds or from regulatory authorities where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records.	
I agree to take part in this research project.	

Name of participant	
Name of lead researcher	
Signature of researcher	
Date*	

*To be signed and dated in the presence of the participant.

Once verbal consent has been granted, the participant should receive a copy of the dated participant consent form, the information sheet and any other written information provided to the participants. A copy of the completed consent form should be kept with the project's main documents which must be kept in a secure location.

Appendix L: Themes and subthemes identified in Study 2

Factors impacting musical engagement	<ul style="list-style-type: none"> Family life or time constraints Working life and tiredness Involvement with other hobbies Perceived effort of engagement (technological engagement) Visual impairment <ul style="list-style-type: none"> Impact on recorded and music listening experience Additional challenges associated with technological engagement for music listening VI not perceived as impacting negatively on musical engagement
Functions of music	<ul style="list-style-type: none"> Background music Concentrated listening Holistic responses to music Music and identity Music and memory Music and mood/music as a comfort Music as a hobby/ an 'accessible' hobby Music as a means of dis/-connecting with your environment/ Losing yourself Music as a way of connecting with others Music listening as knowledge development Role of music and sound in film and TV and the enjoyment of visual art
Level of musical engagement	<ul style="list-style-type: none"> Changes to listening behaviours over time Variability in day-to-day musical engagement Importance of music/ importance of music 'because of VI Regrets not engaging with music (listening and music making) more often Hopes for future musical engagement
Musical engagement during childhood	<ul style="list-style-type: none"> Early musical interest and ability Learning an instrument and performing Live music experiences during childhood Factors influencing musical engagement during childhood <ul style="list-style-type: none"> Influence of others on musical engagement during childhood (parental encouragement) Music at specialist schools Practical factors (e.g. availability of instrument) Role of music in non-musical skill development
Musical preferences	<ul style="list-style-type: none"> Changes and similarities in preferences over time Difficulty pinpointing musical preferences Factors influencing musical preferences <ul style="list-style-type: none"> The music Age Music education and music-making Technology widening access to new music Other people's preferences
Using technology to engage with music	<ul style="list-style-type: none"> Positive impact of technology on musical engagement Technological limitations or challenges (old and new technologies) Factors influencing technological engagement <ul style="list-style-type: none"> Cost Use of technology by others (and sources of help) Concerns regarding learning new technologies (impact of experience) Age (generational differences)
Music collections	<ul style="list-style-type: none"> Digital libraries and cloud storage

	<p>Music streaming and subscription services</p> <p>Physical music collections</p>
Beliefs relating to visual impairment and musicality	<p>Own beliefs relating to associations between VI and musical life</p> <ul style="list-style-type: none"> 'Affinity' for music Heightened musical abilities (noticing finer auditory detail, prevalence of AP) <p>Own beliefs relating to associations between VI and auditory processing</p> <ul style="list-style-type: none"> Distinguishing between heightened 'hearing' and heightened 'auditory processing' Associations between VI and auditory processing/music linked Importance of sound in everyday life <p>Assumptions of others relating to associations between VI and musical life (e.g. assume AP)</p>
Live music	<p>Functions of live music</p> <ul style="list-style-type: none"> Educational/informing one's own playing Offers something different to recorded music Pleasure and relaxation A social experience <p>Factors influencing attendance at live music events</p> <ul style="list-style-type: none"> Practicalities (e.g. companion, cost, transport) Impact of VI (e.g. attitude towards impact of VI, avoiding some types of event) The music <p>Attending live events as a disabled attendee</p> <ul style="list-style-type: none"> Use of specialist services and disabled facilities Staff Accessing information and purchasing tickets <p>Navigation and orientation at live music events</p> <ul style="list-style-type: none"> The physical environment, crowds and lighting Transport and travel <p>Psychological challenges of attending live music events</p> <p>Factors influencing enjoyment at a live music event</p> <ul style="list-style-type: none"> Atmosphere and volume of music Music and quality of performance Connection to performer Audio-visual experience and impact of VI on listening experience
Music-making	<p>Making, producing and performing music</p> <p>Functions of music making</p> <ul style="list-style-type: none"> A challenge An escape from VI A shared experience (with audience and fellow musicians) <p>Stave notation, sheet music and Braille music (challenges and benefits)</p> <p>Factors impacting music-making (VI and non-VI related)</p> <p>Professional music careers</p>

**Exploring the musical experiences of visually impaired adults and adolescents-
Introduction to survey**

I am a researcher carrying out a project which explores the everyday musical experiences of individuals who have a visual impairment, or a severe visual impairment. This survey is the third and final study of the project, and builds on findings from focus group and interview data collected during previous studies.

This survey contains questions on three main topics and takes around 30 minutes to complete. Questions are in sections as follows, 1) All about you, 2) Your everyday musical experiences, and 3) Live music.

If you would like to receive any further information about this project or results from this survey, you can leave your contact details at the end of the survey. To take part you must meet the following 2 requirements:

1. Have a visual impairment or severe visual impairment which has been identified by an optometrist
2. Be 16 years or older

If you would like to check if you can take part in this survey or if you would like to request to complete the survey in an alternative format, such as online or in a phone interview, please contact me via email at mc13clc@leeds.ac.uk.

Notes for completing the survey

- For Yes and No answers, please put a tick in the relevant box.
- For questions where you need to select an answer from a list, please put a tick in the relevant box.
- If asked to rate something on a scale, you can mark you selected rating with a tick or a cross.
- For answers where you need to write an answer, please use the space provided.
- An asterisk next to a question means this question requires an answer.
- Some pages are portrait and some are landscape to allow for tables to be more easily managed.

Inclusion/exclusion criteria and consent

This section will check your eligibility to take part in this questionnaire and will ask you to provide your consent to take part in this research. Please answer yes or no to the following 3 questions.

1) Do you have a visual impairment or severe visual impairment which has been identified by an optometrist?*

Yes/ No. You are not able to take part in the survey. Thank you for your time.

2) Are you aged 16 years or over?*

Yes/ No. You are not able to take part in the survey. Thank you for your time.

3) I am happy to take part in this questionnaire and for my answers to be used for this project. I know that I will not be identified in any publications and that my answers will remain confidential.*

Yes/ No. You are not able to take part in the survey. Thank you for your time.

About you

This section will ask you a series of questions about yourself and your visual impairment. There are 8 questions in total.

4) How old are you? Please state your age in years in the space below, using a numerical figure.*

5) Please select your gender from the list below.*

Male

Female

Prefer not to state

Other (please specify) _____

6) Please indicate the highest academic qualification you are currently studying or have achieved.*

No qualification

GCSEs, O Levels, A Levels or Diploma

Baccalaureate or any other final school exam

Undergraduate degree (e.g. BA/BMus/BSc)

Postgraduate degree (e.g. MA/MPhil/MMus)

PhD, DPhil or any other doctorate

Other (please specify) _____

7) Where do you live? Please select from the following regions.*

North West England

North East England and Yorkshire

Midlands

South East England

South West England

Wales

Scotland

Northern Ireland

Other (please specify) _____

8) Which of the following two descriptions best describes your visual impairment?*

Sight impaired

Severely sight impaired

9) Do you have a degenerative eye condition?*

Yes/ No

9a) Please state the type of condition which has resulted in your visual impairment (if known).

10) Do you have any additional disabilities?*

Yes/ No

10a) If you answered Yes to question 10, please give details of any additional disabilities here.

11) Did you attend a specialist school for children with visual impairments?*

Yes/ No

12) Do you read Braille?*

Yes/ No

Your experience of music

In this section, you will be asked about your engagement with music and any musical training you may have had.

13) Have you ever done any of the following activities? Please tick all that apply from the following list.*

Learned to play one or more instruments

Had singing lessons

Improvised music

Composed music

Conducted music

Played or sung in a musical ensemble (e.g. chamber music, orchestra, choir)

Mixed on decks (i.e. as a Disc Jockey)

None of the above

14) What is the highest level of music education you have (or are currently completing)? Please select one answer.*

No training

GCSE music

A Level music

Grade 8 or equivalent (e.g. ABRSM, Trinity)

Undergraduate level diploma or Degree

Postgraduate level diploma or Degree

Doctorate in Music or Doctorate in Musical Arts/Any other

Other

14a) If you selected Other, please specify in the space below.

15) Which of the following statements best describes you? Please select one from the following 8 statements.*

I have never played an instrument or sung

I used to play an instrument (or sing) years ago

I currently play one instrument (or sing) to a basic level

I currently play one instrument (or sing) to a moderate level (e.g. Grade 6 or 7)

I currently play one instrument (or sing) to a high level (e.g. minimum Grade 8)

I currently play two or more instruments (or sing) to a basic level

I currently play two or more instruments (or sing) to a moderate level (e.g. Grade 6 or 7)

I currently play two or more instruments (or sing) to a high level (e.g. minimum Grade 8)

15a) If you would like to give us further details, please do so in the space below. For example, if you play one or more instruments, what are they, how long have you played them for, and what standard did you reach? If you used to play, please indicate what, how long for, and how long it is since you played.

16) Have you ever worked in a musical field, for example performance, education, composition, technology, production, community music, therapy?*

Yes/ No

16a) If yes, please state what musical field you work, or have worked, in the space below.

17) Do you read Braille music?*

Yes/ No

Everyday musical engagement

The following three questions ask about your level of musical engagement in everyday life.

18) How many hours do you spend listening to music in an average week, including background music listening? Please insert a single figure, to the nearest hour in the space below.*

19) How many hours do you spend listening to music as a sole activity (concentrated music listening) in an average week? Please insert a single figure, to the nearest hour in the space below.*

20) On a scale of 1 to 5, with 1 being 'Strongly disagree' and 5 being 'Strongly agree', please rate your agreement with the following 8 statements.*

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
Music is very important to me					
I listen to music as often as possible					
I prefer listening to music I have chosen myself					
I enjoy seeking out new music to listen to					
I like encouraging others to listen to the music that I like					
I like having conversations with others about the music that I like					
I sometimes struggle to find new music to listen to					
I avoid listening to music because it's too much effort to find something to listen to					

In this section, you will be asked questions about your use of technology for music listening.

21) On a typical day, how often do you use the following types of device to engage with music? For each device, please select either 'Never', 'Sometimes', or 'All the time'.*

	Never	Sometimes	All the time
MP3 player or iPod			
Smart phone			
CD player			
Radio			
Television			
Vinyl record player			
Cassette player			
Laptop, PC or Tablet PC			
Virtual assistant, e.g. Amazon Echo			

21a) Are there any other technological devices that you might use to listen to music which are not listed above? Please list them in the space below, followed by 'Never', 'Sometimes', or 'All the time' to indicate how often you use each device.

22) On a scale of 1 to 5, with 1 being 'Not at all important' and 5 being 'Extremely important', please rate the importance of the following 10 factors on your choice of technological device for music listening.*

	1 Not at all important	2 Slightly important	3 Neither important nor unimportant	4 Important	5 Extremely important
Ease of use					
Familiarity of device					
Sound quality					
Cost of an alternative device					
Access to wide selection of music					
Habit or routine					
Built in accessibility features					
Compatibility with accessibility software					
Portability					
Synchronicity with other devices					

22a) Are there any factors which influence your device choice for music listening which are not listed above? Please list them in the space below, followed by a number from 1, meaning 'Not at all important', to 5, meaning 'Extremely important'.

23) Please state which technological device you use the most to listen to music at home in the space below.*

23a) Please comment on why this technological device is your preferred method for music listening at home.*

24) How often do you use the following online services to listen to music? For each service please select either 'Never', 'Sometimes', or 'All the time'.*

	Never	Sometimes	All the time
Streaming services, e.g. Spotify			
Video hosting sites, e.g. YouTube			
Internet radio stations			

Please see next page for question 25.

25) The following 4 statements ask you about using technology for music listening. Please rate your agreement with these statements on a scale of 1 to 5, with 1 being 'Strongly disagree' and 5 being 'Strongly agree' Please select the final option, 'Not applicable' where appropriate.*

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	NA
Technological developments have made music listening easier for me						
I actively seek out new technology for music listening						
I prefer to listen to music from a physical collection than in a digital format						
I like streaming services such as Spotify as they take away the need to choose music						

26) The following 8 statements (on the next page) ask you about challenges associated with using technology for music listening. Please rate your agreement with these statements on a scale of 1 to 5, with 1 being 'Strongly disagree' and 5 being 'Strongly agree' Please select the final option, 'NA where appropriate.*

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	NA
Learning to use new technologies and devices is a challenge for me						
I sometimes struggle to find relevant information or advice on using technology for music listening						
I prefer mainstream devices because specialist assistive devices cost too much						
I have experienced difficulties saving accessibility settings on a device						
System updates result in new challenges accessing music on a device						
Mainstream devices meet my needs better than specialist assistive devices						
The cost of streaming services such as Spotify puts me off using them						
The cost of new technology puts me off exploring new means of accessing music						

27) Please indicate the age of onset of your visual impairment from the following four options.*

- a) I was born with a visual impairment or developed a visual impairment before the age of 4 years old
- b) I developed a visual impairment before the age of 12 years but have experienced changes to my vision at other times in my life
- c) I developed a visual impairment between the age of 4 and 12 years old
- d) I developed a visual impairment after the age of 12 years

27a) If you developed a visual impairment after the age of 12 years, please indicate, to the nearest year, the age at which you developed this impairment. Please write a numerical figure in the space below.

Your answer to Question 27 will determine which of the following questions on the following pages to answer.

- If you answered a) or c) you should skip to Page 20 to complete Question 30 (do not answer Question 28 or 29).
- If you answered b) you should skip to Page 18 to complete Question 29 (do not answer Question 28 or 30).
- If you answered d) you should continue to Page 16, to complete Question 28 (do not answer Question 29 or 30).

Impact of visual impairment on musical engagement. Answer this question if you answered d) to Question 27.

This question will ask you to consider the impact that having a visual impairment may have had on your engagement with music.

28) On a scale of 1 to 5, with 1 being 'Strongly disagree' and 5 being 'Strongly agree', please rate your agreement with the following 10 statements. Please select the final option, 'NA' where appropriate.

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	NA
A change to my vision has made it more difficult for me to access recorded music						
I worry that a change to my visual impairment will impact on my ability to engage with music						
Music is a hobby which remains accessible to me						
I consider music to be a constant in my life						
I have listened to more music since the onset of my visual impairment						
Music has become more important to me because of my visual impairment						
Sight loss has impacted on the way I perceive musical sounds						
People assume that I have heightened musical abilities due to my visual impairment						
I am aware of longstanding traditions of 'blind musicianship', such as the UK tradition of blind piano tuners						
I believe there is an association between having a visual impairment and having heightened musical abilities						

Impact of visual impairment on musical engagement throughout your life. Answer this question if you answered b) to Question 27.

This question will ask you to consider the impact that having a visual impairment, and changes to your vision, may have had on your engagement with music.

29) On a scale of 1 to 5, with 1 being ‘Strongly disagree’ and 5 being ‘Strongly agree’, please rate your agreement with the following 14 statements. Please select the final option, ‘NA’ where appropriate.

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	NA
Music was important to me during my childhood						
I exhibited musical ability as a child						
My parents or guardians encouraged me to partake in music during my childhood						
I believe my upbringing in a musical family has influenced my musical interests today						
I was encouraged to pursue music as a hobby or profession at a mainstream school						
Attending a specialist school for the blind encouraged me to pursue music as a hobby or profession						
Music is a hobby which remains accessible to me						
I consider music to be a constant in my life						
Music is particularly important to me because I am visually impaired						
A change to my vision has made it more difficult for me to access recorded music						
I worry that a change to my visual impairment will impact on my ability to engage with music						

Table continued	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	NA
People assume that I have heightened musical abilities due to my visual impairment						
I am aware of long-standing traditions of 'blind musicianship', such as the UK tradition of blind piano tuners						
I believe there is an association between having a visual impairment and having heightened musical abilities						

Musical engagement throughout your life. Answer this question if you answered a) or c) to Question 27.

This section will ask you to consider the role of music throughout your life, and the possible impact that having a visual impairment has had on your engagement with music.

30) On a scale of 1 to 5, with 1 being 'Strongly disagree' and 5 being 'Strongly agree', please rate your agreement with the following 12 statements. Please select the final option, 'NA' where appropriate.

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	NA
Music was important to me during my childhood						
I exhibited musical ability as a child						
My parents or guardians encouraged me to partake in music during my childhood						
I believe my upbringing in a musical family has influenced my musical interests today						

Table continued	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	NA
I was encouraged to pursue music as a hobby or profession at a mainstream school						
Attending a specialist school for the blind encouraged me to pursue music as a hobby or profession						
Music is a hobby which is accessible to me						
I consider music to be a constant in my life						
Music is particularly important to me because I am visually impaired						
People assume that I have heightened musical abilities due to my visual impairment						
I am aware of longstanding traditions of 'blind musicianship', such as the UK tradition of blind piano tuners						
I believe there is an association between having a visual impairment and having heightened musical abilities						

Functions of music

31) On a scale of 1 to 5, with 1 being ‘Strongly disagree’ and 5 being ‘Strongly agree’, please rate your agreement with the following 11 statements relating to the function of music in your life.*

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
Music helps to connect me to my environment					
Music helps me to enjoy film and television					
Music helps me to enjoy visual art and media					
Music offers an escape from my visual impairment					
Music is an important part of my identity					
Music offers a way for me to connect with family and friends					
Music is a comfort to me					
Music offers a means of self-expression					
Music listening is a whole-body experience, not just an auditory experience					
Music is a therapeutic tool for me					
Music listening is an important part of my daily routine					

This is the final section of the survey. In the following pages you will progress through questions which will focus on your attendance at live music events.

32) Below is a list of cultural and sporting events. Please indicate how often you attend each type of event by selecting either 'Never', 'Sometimes' or 'Frequently'.*

	Never	Sometimes	Frequently
Live sporting event			
Comedy night			
Street festival or carnival			
Play			
Ballet			
Visual art or multimedia exhibition			
Literature event			
Film or TV festival			
Fashion event			
Classical music concert			
Pop concert			
A musical			
Opera			
Club night			
Outdoor music festival			

Attendance and experiences of live music events

33) Below is a list of 16 factors which might influence your decision to attend a live music event. On a scale of 1 to 5, with 1 being 'Not at all important' and 5 being 'Extremely important', please rate the importance of these factors in your decision to attend live music events. If you have not attended a live music event, or believe a factor does not apply to you, please select the final option, 'NA'.*

	1 Not at all important	2 Slightly important	3 Neither important nor unimportant	4 Important	5 Extremely important	6 NA
Familiarity with the act/-s performing						
The musical programme						
Cost of tickets						
Availability of free disabled or carer tickets						
Availability of public transport to event						
Cost of travel to event						
Distance and time to travel to event						
Familiarity of venue						
Availability of seating in a disabled area						
Availability of seating which maximises use of residual vision						

Table continued	1 Not at all important	2 Slightly important	3 Neither important nor unimportant	4 Important	5 Extremely important	6 NA
Ease of access to toilets						
Attendance with a charitable group or organisation						
Availability of a sighted companion or family member to attend with						
Comfort of guide dog						
Size of venue						
Number of attendees and crowds						

33a) Are there any factors not listed above which might influence your decision to attend a live music event? If yes, please state in the space below and indicate, on a scale of 1, meaning 'Not at all important' to 5, meaning 'Extremely important', how important these factors are in the decision-making process.

34) Below is a list of 8 statements relating to your motivations for attending live music events. On a scale of 1 to 5, with 1 being 'Strongly disagree' and 5 being 'Strongly agree', please rate your agreement with these statements. Please select the final option, 'NA' if a statement does not apply to you, or if you have never attended a live music event.*

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	NA
Live music events are an opportunity to spend quality time with friends or family						
I attend music events to meet like-minded people						
Live music events are an opportunity to expand my musical knowledge						
Live music events allow me to learn from the performances of others						
Musical events are an opportunity to discover new music and artists						
Music events offer something additional to listening to music at home						
Attending music events offers a break from the routine of everyday life						
Live music events are a chance to escape from the worries of everyday life						

The following questions relate to the accessibility of live music events.

35) Below is a list of four types of service or material that venues may offer to attendees of live music events who have a visual impairment. Please indicate which of the following services or materials you have used at a live music event. Please indicate frequency of use by ticking 'Never', 'Sometimes', or 'Every time I attend an event'.*

	Never	Sometimes	Every time I attend an event
Audio-description services			
Touch tours			
Braille copies of written materials (e.g. concert programmes or accessibility information)			
Digital downloads of written materials (e.g. concert programmes or accessibility information)			

The following questions contain 3 short lists of statements relating to the impact of specialist services and materials on your enjoyment of live music events. These lists relate to 1) Audio Description, 2) Touch tours, and 3) Written materials. Please rate your agreement with each statement. If the statements relate to a service or material that you have not accessed before, please leave this question blank and move on to the next relevant question.

Audio description.

36) On a scale of 1 to 5, with 1 being ‘Strongly disagree’ and 5 being ‘Strongly agree’, please rate your agreement with each of the following 5 statements.

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
Audio description has increased my enjoyment at live music events					
I have always been able to access an audio described performance when needed					
I feel informed about the availability of audio described performances					
Without audio description I find it difficult to follow the storyline of operas					
Without audio description I find it difficult to follow the storyline of musicals					

Touch tours.

37) On a scale of 1 to 5, with 1 being ‘Strongly disagree’ and 5 being ‘Strongly agree’, please rate your agreement with the following 2 statements.

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
Touch tours have increased my enjoyment at live music events					
I feel informed about the availability of touch tours running in relation to performances					

Written information.

38) On a scale of 1 to 5, with 1 being ‘Strongly disagree’ and 5 being ‘Strongly agree’, please rate your agreement with the following 2 statements.

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
I am always offered written materials relating to a live performance in an accessible form					
I find it helpful to receive written materials relating to a live performance prior to my attendance					

39) Please see the following list of 10 statements relating to accessibility of venues and your experiences at live music events. On a scale of 1 to 5, with 1 being ‘Strongly disagree’ and 5 being ‘Strongly agree’, please rate your agreement with these statements. If the statement relates to an experience which is not relevant to you, please select the ‘Not applicable’ option.*

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	NA
I find the process of purchasing tickets for music events easy						
It is easier to phone up a venue to find out about accessibility than to search for information online						
I find it easy to navigate at live music events						
Low lighting makes navigation at live music event venues more difficult						
I feel more comfortable at smaller venues than larger venues, e.g. arenas or festivals						
I worry about not being able to find toilets at live music events						
Staff at live music events understand my accessibility requirements						
The volume of sound at concerts can feel like ‘sensory overload’						
I miss out on some aspects of a live music event due to my visual impairment						
A change in my visual impairment has impacted on my attendance at live music events						

The final 3 questions ask you to reflect on your experiences at musical events and your opinions on the accessibility of events. Please provide as much detail as possible in the space provided.

40) Please reflect on your most recent live music experience, including details of when you attended, and the type of venue visited. Please comment on any barriers or challenges to attendance, and your overall experience of attending this event. If you have not attended a live music event, please insert N/A

41) To what extent do issues of accessibility change according to the size and type of the venue? If relevant, please compare your experiences at different types of venue, such as concert halls, arenas, nightclubs, outdoor venues, or local pubs. If you don't think this question applies to you, please insert N/A. *

42) What do you think venues and event organisers could do to make live music events more accessible for attendees who have a visual impairment? *

End of survey

You have reached the end of this survey. Thank you for taking part. Your responses will provide valuable insight into the role of music in everyday life, and potential barriers to musical engagement, relating to both technology and live music events. We hope that the findings from this survey, and the previous studies carried out for this project, will contribute to improved access to musical experiences for people, and inform future research design.

If you have any questions about the study, or you would like to receive any further information about this project or results from this survey, please contact Claire via email at mc13clc@leeds.ac.uk with your name and contact details.

Appendix N: Musical fields worked in by participants in Study 3

I did one performance in an elderly care home

Primary music teacher

I have worked as a disc jockey on Internet radio since 2009.

Christian and folk music

Teacher, performer and community music facilitator

Workshop leading (opera north)

Education

Currently a Marketing Product Specialist at Native Instruments

I compose music and sell it.

Freelance composition and production

Non-professional writing of music and songs for school performances and community events, plus entries to various music/song writing competitions. In 1998 I wrote lyrics, music and arrangements for a community musical which was performed in two local schools with a cast of primary and secondary pupils plus adults, with musicians drawn from around the area. Over the years I have had 5 finalist entries in the UK Song writing Contest, plus some 30 semi-finalists.

Professional and semi-professional standard in Ireland and GB and Spain music shop owner

Piano tuner

I run my own business, Golden Chord transcribing music into braille music.

Teacher and performer

I worked with people who have Dementia and was involved in music therapy with assistance from Sylvia Young school this really helped the well-being of the people we were helping

Lyricist

Play drums in post punk band

Sound Engineer, Music Facilitator

Bands & Duos

Professional singer

Head of music at a college, professional pianist and accompanist.

Singing- performance

Appendix O: Mean ratings of musical engagement statements for ‘Late onset’, ‘Early onset’ and ‘Early onset with changes’ groups in Study 3

‘Late onset’ statements	<i>N</i>	Lowest	Highes	<i>M</i>	<i>SD</i>
		rating	t rating		
1 A change to my vision has made it more difficult for me to access recorded music	28	1	5	3.18	1.36
2 I worry that a change to my visual impairment will impact on my ability to engage with music	26	1	5	2.85	1.22
3 Music is a hobby which remains accessible to me	27	2	5	4.00	1.04
4 I consider music to be a constant in my life	28	2	5	4.36	.91
5 I have listened to more music since the onset of my visual impairment	29	2	5	3.31	1.17
6 Music has become more important to me because of my visual impairment	29	1	5	3.28	1.31
7 Sight loss has impacted on the way I perceive musical sounds	28	1	5	3.18	1.34
8 People assume that I have heightened musical abilities due to my visual impairment	29	1	5	3.24	1.38
9 I am aware of longstanding traditions of ‘blind musicianship’, such as the UK tradition of blind piano tuners	28	1	5	3.75	1.43
10 I believe there is an association between having a visual impairment and having heightened musical abilities	29	1	5	2.41	1.40

‘Early onset with changes’ statements	<i>N</i>	Lowest	Highes	<i>M</i>	<i>SD</i>
		rating	t rating		
1 Music was important to me during my childhood	5	3	5	4.20	.84
2 I exhibited musical ability as a child	5	3	4	3.80	.45
3 My parents or guardians encouraged me to partake in music during my childhood	5	3	5	4.20	.84
4 I believe my upbringing in a musical family has influenced my musical interests today	4	2	5	3.75	1.50
5 I was encouraged to pursue music as a hobby or profession at a mainstream school	3	2	5	3.67	1.53
6 Attending a specialist school for the blind encouraged me to pursue music as a hobby or profession	1	4	4	4.00	
7 Music is a hobby which remains accessible to me	5	1	4	3.00	1.41
8 I consider music to be a constant in my life	5	4	5	4.60	.55
9 Music is particularly important to me because I am visually impaired	5	2	5	3.60	1.14
10 A change to my vision has made it more difficult for me to access recorded music	5	2	5	3.40	1.34

11 I worry that a change to my visual impairment will impact on my ability to engage with music	5	1	5	3.20	1.64
12 People assume that I have heightened musical abilities due to my visual impairment	5	4	5	4.40	.548
13 I am aware of long-standing traditions of 'blind musicianship', such as the UK tradition of blind piano tuners	5	1	5	3.60	1.67
14 I believe there is an association between having a visual impairment and having heightened musical abilities	5	2	5	3.40	1.52

'Early onset' statements	<i>N</i>	Lowest Highest		<i>M</i>	<i>SD</i>
		rating	rating		
1 Music was important to me during my childhood	60	1	5	4.57	.96
2 I exhibited musical ability as a child	60	1	5	3.72	1.34
3 My parents or guardians encouraged me to partake in music during my childhood	60	1	5	3.82	1.32
4 I believe my upbringing in a musical family has influenced my musical interests today	50	1	5	3.52	1.40
5 I believe my upbringing in a musical family has influenced my musical interests today	50	1	5	3.46	1.37
6 Attending a specialist school for the blind encouraged me to pursue music as a hobby or profession	34	1	5	3.32	1.53
7 Music is a hobby which is accessible to me	58	1	5	4.07	1.09
8 I consider music to be a constant in my life	60	2	5	4.50	.81
9 Music is particularly important to me because I am visually impaired	60	1	5	3.00	1.39
10 People assume that I have heightened musical abilities due to my visual impairment	60	1	5	3.67	1.28
11 I am aware of longstanding traditions of 'blind musicianship', such as the UK tradition of blind piano tuners	58	1	5	3.84	1.34
12 I believe there is an association between having a visual impairment and having heightened musical abilities	60	1	5	2.43	1.23

Appendix P: Themes identified in relation to participants' most recent live music experiences and supporting comments

1 'Missing out' on visual aspects	
NEGATIVE	I couldn't see the stage in details, only lights etc, especially as the sun went down.
OVERCOMING BARRIER	My friend accompanied me to the concert to describe visual effects.
2 Frequency of attendance/familiarity of venue	
POSITIVE	Easy peasy to attend because I've been a lot before. Frequent patron and performer so my GD [Guide Dog] knows her way around. I book there all the time.
3 Tickets	
NEGATIVE	Tickets sell out too quickly
Access to disabled/carer tickets	
POSITIVE	Had a free ticket for my wife to act as my guide.
NEGATIVE	Large venues only provide a limited number of "access" tickets including for a companion.
Others purchasing tickets on their behalf	
OVERCOMING BARRIER	Someone helps to purchase tickets.
Ticket agencies	
NEGATIVE	Difficulty with ticket agencies- they don't know about the venues so can't answer questions about access (also they charge a booking fee and cost on phone).
Online bookings	
POSITIVE	Booking the tickets online is easy.
NEGATIVE	Booking online is slow as websites are often inaccessible using screen readers.
Phone bookings	
POSITIVE	Tickets purchased and accessibility requirements discussed over the phone.
NEGATIVE	It is impossible to book these for popular events because you can only do so by phone, and the lines are always engaged until it is too late and they are sold out.
4 Physical environment and navigation	
NEGATIVE	Too many steps, too dark and too loud. Internal steps are not all even and straight. I don't go to these events. Too many people, noise, can't see, difficulty finding toilets. Basically scared.
Size of venue	
POSITIVE	Once inside it's small enough to find my way to a seat and to the toilets.
POSITIVE AND NEGATIVE	Small venue, very friendly, but crowded.
Navigating outside the venue	
NEGATIVE	Can't find my way outside the building. As for the venue itself, it was quite of a challenge to get inside because of the crowd outside.
Crowds	
NEGATIVE	Large crowds can make it very disorientating.

OVERCOMING BARRIER	We left early to avoid the crowds.
Finding toilets (non-disabled)	
NEGATIVE	Theatre, toilets difficult.
5 Lighting	
NEGATIVE	Too many steps, too dark and too loud. Poor lighting. Strobe lighting.
Changing light outdoors (sunset)	
POSITIVE	Glorious sunshine beaming down, couldn't see a thing! (photophobia).
NEGATIVE	I couldn't see the stage in details, only lights etc, especially as the sun went down.
6 Sound volume	
NEGATIVE	The music was a bit loud. Found the sound volume too loud at times. We enjoyed the event but the 3 music venues were too loud, making it hard to buy food @ the kiosks or chat to friends. I left the venue (theatre) due to the music being too loud and anxiety. Plus the overload of noise, so it can be very disorientating.
OVERCOMING BARRIER	I wore earplugs to deaden the sound volume so I could enjoy the gig fully.
7 Staff	
POSITIVE	The staff are always understanding, there is not usually any need for them to intervene accessibility wise but I know that if there was an issue they would be more than happy to help. Staff were incredibly helpful when it came to finding seats. The staff are great, they are very helpful without being patronising.
NEGATIVE	I find staff do not know how to help a person who has sight loss and if you were in a wheelchair they seem to jump through hoops to help. There was a problem trying to find out where to leave my dog. Eventually they moved out a seat so there was enough space for the dog. Staff were okay in the end but I did have to fight to get something done. The staff had very little awareness of barriers facing the visually impaired.
8 Music/performer	
POSITIVE	Missed out on the visuals but the music was good. We were still able to enjoy the singing and the orchestral music. Even got a shout-out from the artist as we'd corresponded on twitter, as he knew my name. Made my day completely.
9 Overall experience	
POSITIVE	Enjoyed the concert. The show itself was great too.
Enjoyment despite challenges	
POSITIVE	Organ recital last month in small church. Without sighted companion, I would not have found the venue. No material in alternative format was available. Enjoyed the concert. I enjoyed the night, I had family and friends with me, but I do find it hard in big crowds, because I have no idea where I'm standing. Large crowds can make

it very disorientating, plus the overload of noise, so it can be very disorientating. However, it was a great night and I thoroughly enjoyed it.

10 Disabled facilities

POSITIVE	A dedicated accessible viewing platform to view the main stage. Really, really good.
	I was given access to a platform so I could see clearly.
NEGATIVE	The venue has been adapted to be accessible, which isn't ideal eg accessible toilets are a long way from other toilets, so had to wait for partner to return from her facilities.

Appropriateness of facilities depending on event

POSITIVE	This was a sit-down comedy music show, so I did not mind being in the disabled seating area outside of the crowd, we were able to have a few drinks and were close to disabled toilets.
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11 Accessibility

POSITIVE	The accessibility was amazing.
NEGATIVE	Have been unable to attend events due to difficulties with travel and sighted support not being available to me.
	I don't go to these events. Too many people, noise, can't see, difficulty finding toilets. Basically scared.

Seating

POSITIVE	Good easy access seating.
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Travel and transport

NEGATIVE	Can't be accessed without a car.
	It's sometimes a long wait for transport home afterwards.
NEGATIVE/ OVERCOMING BARRIER	Travelled by taxi two hours before expected arrival time to account for any potential problems.

Written materials

NEGATIVE	No alternative format programme is offered, and as the instruments changed for each piece played a description of what was on the stage was needed.
NEUTRAL	Accessibility was basically there because we had someone to read us the program.

Sighted companion or attending alone

OVERCOMING BARRER	I always attend with my wife, who is fully sighted. So I don't have any of the problems that you are driving at in this part of the survey.
	I went alone as I couldn't find anyone to go with, so I just took an Uber and did my thing... despite being totally blind, I did it, and am very glad... Fantastic time and I'd do it again if I had to.
	I was being sighted guided by one of my friends and I wasn't using my white cane as I knew it would be crowded but this wasn't a problem.
NEGATIVE	I hate going alone, regardless of any other question, because of my lack of confidence, partly caused by my total blindness.
	I attended with my wife. It would have been barely possible, & no fun, to try to attend the event on my own.
	Large venues are very difficult to navigate alone.

Specialist services (e.g. Audio Description)

OVERCOMING BARRIER	I attended an opera recently but had studied the music, received the audio briefing and been into rehearsal to see the set and clothes. although the performance wasn't audio described, I looked up the story line before hand and used a monocular (similar to a binocular) to look at some of the details on stage. . I did find the experience enjoyable with some descriptions from my friends.
NEGATIVE	The difficulty for her and I was the fact that there was no audio description, so it was difficult to follow what was happening at times. The most difficult part was to understand what was going on on-stage, the public was laughing at times but we did not know why sometimes.
Guide Dogs	
POSITIVE	it was great as I was able to be with my partner and both of us were able to have our guide dogs in the room with us.
NEGATIVE	there was a problem trying to find out where to leave my dog. Eventually they moved out a seat so there was enough space for the dog. Staff's ignorance about access of guide dogs.
Information	
POSITIVE	You can get information on an email or can access it on the internet.
12 Other factors/concerns	
Psychological factors (e.g. anxiety)	
NEGATIVE	I left the venue (theatre) due to the music being too loud and anxiety. Anxiety about finding venue and seat meant I only attended because my wife accompanied me.
Bag/body searches	
NEGATIVE	We had to be searched to go which is always a bit daunting as you can't see their faces and expressions

Appendix Q: Themes and subthemes relating to the impact of size on venue accessibility in Study 3

Accessibility at any size venue a barrier

- Importance of prior discussion or research with any venue
- No impact of size of venue on accessibility
- Pros and cons of both small and large venues

Additional factors at play

- Difficulty is in unfamiliarity
- Older buildings less accessible
- Staff training and attitude a greater factor
- Type of event
 - Opera has low accessibility
- Use of AD
 - AD at ballet
 - Hopes to try AD

Benefits of larger venues

- Better awareness and training at larger venues
- Crowds part of atmosphere
- Large venues accommodating
- Large venues more accessible

Benefits of smaller venues

- Better sound quality at smaller venues
- Preference for smaller venue (esp. when alone)
- Small venues allow use of residual vision
- Smaller venues more accessible
 - Fewer crowds at smaller venues
 - Greater independence
 - Greater staff support
 - Smaller venues easier to navigate
 - Smaller venues more accommodating
- Volume of sound lower

Disadvantages or challenges associated with larger venues

- Crowds at larger venues
 - Larger audience creates greater challenge
- Difficult to use residual vision
- Large venues cause for concern, worry, anxiety
- Large venues difficult to navigate
- Large venues limit use of residual vision
- Larger= greater challenges
- Security checks at larger venues
- Staff less helpful at larger venues
- The larger the venue, the greater the challenge
- Volume of sound is greater

Disadvantages or challenges associated with smaller venues

- Harder to find accessibility information
- Harder to get accessible seating
- No accessibility area at smaller venues
- Smaller venues difficult to navigate
- Smaller venues less accessible
- Smaller venues less accommodating
- Volume of sound too low at small venues

Factors important at all venues

- Access to toilets
- Attend with someone (avoids difficulties, no need to rely on staff)
- Avoid venues with loud volumes of music
- The music
- Familiarity of venue important
- Lack of access to visual aspects of performance
- Low lighting at some venues
- Preference for venues with seating
- Seating versus standing
 - Disorientating to stand at venues
- Toilets avoided for hygiene reasons
- Use of free carer or disabled ticket
- Using a guide dog
- Written materials in alternative format

Specific types of venue

- Avoiding clubs
- Outdoor venues
 - Finding toilets at outdoor venues
 - Outdoor venues more accessible
 - Sound failing at outdoor venues
 - Temporary venues less accessible