# Exploring how Long Shifts Impact upon Nursing in Inpatient Mental Health Settings

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The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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## Abstract

**Background:** Research into the effect of working long shifts in mental health care had not been carried out before. Research into long shifts in other settings had mixed findings regarding fatigue and job satisfaction for nursing staff and quality of care for patients; evidence indicated that safety is reduced when long shifts are used.

**Aim:** This research explored the experience of nurses, student nurses and support workers working long shifts in mental health settings and the factors they perceived influenced their wellbeing and patient care when working long shifts.

**Method:** Semi-structured interviews were carried out with 17 nursing staff who worked in inpatient mental health settings. Nursing staff were recruited through social media. Under a pragmatic paradigm framework analysis was used to explore the data.

**Results:** Five categories emerged: 'being present and being absent'; 'using up personal resources'; 'getting rest and why it can be difficult'; 'being part of a team' and 'getting the most out of time off'.

**Conclusion:** The duration of emotional labour and restricted time to recover between long shifts created high levels of job demand, impacting nursing staff and patients. Job demand was buffered by job control factors, such as sufficient: breaks, handover, staff mix and regular shift pattern. Social support buffered job demand with cohesive teams providing practical and emotional support for nursing staff working long shifts.

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## List of Abbreviations

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| CAMHS: | Child and Adolescent Mental Health Service |
| IPA: | Interpretive Phenomenological Analysis |
| JDC: | Job Demand Control |
| JDCS: | Job Demand Control Support |
| MDT: | Multi-Disciplinary Team |
| NHS: | National Health Service |
| NMC | Nursing and Midwifery Council |
| OA: | Older Adult |
| RCN: | Royal College of Nursing |
| RMN: | Registered Mental Health Nurse |
| RN: | Registered Nurse |
| UK: | United Kingdom |

# Background

## Introduction

Hospitals require around the clock staffing. To meet this need it is traditional to divide the 24-hour day into two 'short shifts' of 7.5 hours and one long night shift. Increasingly two shifts are used instead (Harris, Sims, Parr, & Davies, 2015), with one long shift over the day and another long shift overnight. For nursing staff this has the effect of condensing the working week into three or four shifts, creating additional days off. This move, brought about primarily by efficiency savings (Harris et al., 2015) has implications for patient safety and staff wellbeing (Ball, Maben, Murrells, Day, & Griffiths, 2015). Research has been conducted into the effects of long shifts in general nursing, however there remains little evidence of its impact in mental health settings. This narrative review explored existing nursing research into the effect of long day shifts on staff fatigue, job satisfaction and work life balance, patient safety and quality of care. The Job-Demand-Control-(Support) Model and theories of the therapeutic relationship were used to guide further thinking into the impact of long shifts on mental health nurses and their patients.

### Terminology.

This review focused on the impact of working long day shifts. The phrase 'long shift' therefore refers to the long *day* shift and not the night shift unless otherwise specified. While '12-hour shifts' at times appears synonymous with long shifts, long shifts are defined at various lengths, from 10 hours (Chudleigh et al., 2005; Stimpfel & Aiken, 2013) to 13 or 14.5 hours (e.g. Trinkoff et al., 2011). 'Short shifts' refer to shifts of approximately 7.5 hours, this term is a catch-all for early shifts (the first shift of the day), late shifts (the second shift, which partially crosses over with the early shift and hands over to the night shift) and twilight shifts (a final, less commonly used shift which crosses over with late shift and night shifts).

A variety of terms is used to define people who make use of health services, including "service user", "customer", "client" and "patient". Particularly within mental health there is debate about which term is most appropriate (Christmas & Sweeney, 2016; Simmons, Hawley, Gale, & Sivakumaran, 2010). The debate is in

regards to the connotations of different terms, for example the traditional term "patient" may be argued to indicate hierarchical relationships that imply passivity in the patient (Neuberger, 1999). On the other hand, alternative terms are also argued to be unsatisfactory, for example "service user" and "customer" may be critiqued for the commodification of basic human need (Cowden & Singh, 2007). Furthermore "client" and "customer" both infer a voluntary nature to a person's role in health services, which, when a person enters inpatient mental health care against their will, is inaccurate (Torrey, 2011).

It was decided to use the term "patient" for two reasons. First "patient" was the mode term used by participants in this study, and so was deemed to best reflect nursing staff account. Second the term "patient" was commonly used in the physical health literature on which this study into long shifts in mental health settings was founded. Using the same term may be seen not to discriminate between the right of people with physical and/or mental health difficulties (Christmas & Sweeney, 2016).

The experience of registered nurses, student nurses and support workers was the focus of this research; this is a varied group of workers. Increased reliance on support workers due to demands on care services and nurse shortage (Sarre et al., 2018) makes it vital that differences in role are held in mind. A notable difference between roles is that UK nurses must complete a degree in nursing and be professionally registered with the Nursing and Midwifery Council (NMC) whereas a person does not require training to become a support worker or to be overseen by a professional body. In this thesis the term "nursing staff" is used as a catch all for this varied group of workers and "nurses" refers to registered nurses.

**Prevalence of long shifts.**

Data on UK nursing staff shift patterns is not routinely collected at a national level, the most recent reported UK data was collected in 2009 by the The Royal College of Nurses (RCN) Employment Survey. This surveyed 9,000 registered and unregistered members of the RCN, from their findings national estimates may be drawn (Ball et al., 2014). This survey showed that long shifts are widely used in the UK, with 52% of NHS hospital nurses reported to work long shifts of 12 hours and over in 2009, a substantial increase from 31% in 2005. In 2009 20% of mental health nursing staff reported working long shifts, across varied settings including community and hospital.

While long shifts are common in the UK this is not the case internationally; Griffiths et al. (2014) undertook a cross-sectional survey of 31,627 registered nurses in acute hospitals across 12 European countries as part of the wider RN4CAST study (Sermeus et al., 2011). They found that long shifts were commonly used in only three countries: Poland, Ireland and England, with Switzerland, Spain and Finland employing long shifts under 10% of the time and Belgium, Germany, Greece, the Netherlands, Norway and Sweden less than 5%. This variation in use of long shifts indicates a cultural, political and/or financial context behind its popularity in the UK.

**Efficiency savings.**

Initial increase in the use of long shifts in the UK can be linked to nurse shortages in the 1990s with the more recent increase driven by the financial pressures of austerity (Harris et al., 2015). Long shifts created efficiency savings by reducing the overlap between shifts and by extending night shifts, which often require fewer nursing staff, and thus reduce staffing costs (Dall'Ora & Griffiths, 2017). These potential savings are significant, estimated at £1 million to £3 million for a moderate sized hospital when moving from eight hour shifts (NHS Evidence, 2010). The case study on which this estimate was based found that an 8 hour shift pattern required approximately 28 hours staffing for every 24 hour day. However this may now be inaccurate, as contemporary short shift hand-over periods are often shorter (and therefore cheaper) than this case study suggested.

Lorenz (2008), in her consideration of the ethical dilemma of using long shifts, highlighted the competing priorities of health organisations: which include patient, staff and organisational priorities. As the initial drive towards long shifts was to meet organisational priorities by reducing cost, it is important to explore the secondary impact that this pragmatic solution may have on staff and their patients.

**Overview of Current Research**

There is a lack of research into the effect of long shifts in mental health settings. A recent scoping review of the impact of long shifts on nursing (Harris et al., 2015) revealed 85 studies, of which only two specified psychiatric settings among multiple units observed, with neither taking a specific interest in mental health nursing staff or their patients (Barker & Nussbaum, 2011; Scott et al., 2007). A search of four databases (Embase, Ovid Medline, PsychInfo, CINAHL) was

carried out using the following search terms: Long day* or Long-day* or Long shift* or Long-shift* or Shift pattern* or Shift-pattern* or Shift work or Shift-work or Extended shift* or Extended-shift* or Extended day* or Extended-day* or 12 hour shift* or 12-hour-shift* and Mental health or Mental-health or Psychiatric and Nurs*. Results from these searches concurred with the lack of evidence described by Harris et al. (2015); studies were identified on the impact of long shifts in general nursing, but not in mental health nursing. It was evident that while there was interest in the impact of long shifts, research had yet to focus on long shifts in mental health nursing.

The following narrative review is therefore founded on general nursing research, with additional consideration of its relevance to mental health nursing. As a narrative review it was outside of the remit of this study to give a comprehensive description of *all* existing literature. Papers were therefore selected to give a representation of the overall literature. The focus when selecting papers was on presenting a balanced view of the positive, neutral and negative findings in existing research. Selected studies focussed on prominent areas of current research; these were: 1) fatigue in long shifts, 2) patient safety, 3) job satisfaction, 4) quality of care and 5) moderating factors.

Models of occupational stress and theory relating to the therapeutic relationship were also explored. These studies were used to inform the methodology, method and interpretation of findings in this study.

## Fatigue

### Quantitative research of fatigue and long shifts.

Working long shifts creates a condensed week, with a longer period of work and reduced rest periods over a series of days and more days off. This division of time has been linked by a series of studies to increased fatigue. The majority of the studies considered explored multiple long shifts, and so measured the impact of reduced rest between shifts and working long hours (Chen, Davis, Daraiseh, Pan, & Davis, 2014; Flo, Pallesen, Moen, Waage, & Bjorvatn, 2014; Geiger-Brown et al., 2012; Iskra-Golec, Folkard, Marek, & Noworol, 1996; Rhéaume & Mullen, 2017; Szczurak, Kamińska, & Szpak, 2007) one study focussed specifically on fatigue within a single shift (Chen, Davis, Davis, Pan, & Daraiseh, 2011).

***Reduced rest and increased fatigue when working long shifts***

Insufficient rest between shifts is a principal finding of research into long shifts. Twenty-eight nurses in Canada kept a sleep diary, answered questionnaires and wore a device that measured their activity (Rhéaume & Mullen, 2017). It was found that those working 12-hour shifts slept significantly less than those working 8-hour shifts. Monitoring lasted four consecutive days; by the fourth day on average nurses working long shifts achieved only five hours of sleep, it took longer for them to get to sleep and on waking they reported feeling sleepier than those working short shifts. To manage this sleep deprivation nurses on long shifts reported taking more naps during their breaks. A noteworthy drawback to this small study is that nurses working 8 hours were doing only day shifts; nurses working 12 hours worked "rotating" shifts; day and night shifts. Long day shifts and long night shifts were not explored separately. It is impossible therefore to differentiate whether differences between short and long shift groups were due to shift length or time of shift. For example reported sleepiness and difficulty reaching sleep could be due to interference with the circadian rhythm (Boivin & Boudreau, 2014) rather than duration of the shift.

Geiger-Brown et al. (2012) also used questionnaires, sleep diaries and activity-monitoring devices when they measured sleep and sleepiness in 80 US nurses across three consecutive 12-hour shifts. Again nurses were working a mix of night and day shifts, however in this study day and night shifts were analysed separately. This study found reduced sleep time for nurses working long day shifts, with nurses achieving on average 5.7 hours sleep between shifts (in comparison to 5.4 hours in nurses working night shifts). Like Rhéaume & Mullen (2017) nurses were found to be progressively more sleepy each consecutive day shift. One third of nurses reported fatigue, with 'inter shift-fatigue' most prominent; this is the experience of not feeling recovered between the previous and current shift (Winwood, Winefield, Dawson, & Lushington, 2005). In Rhéaume and Mullen (2017) it is possible that delayed sleep and reduced sleep time was related to lack of ability to sleep due to an out of sync sleep cycle. Geiger-Brown et al. (2012)'s analysis, however, indicated that reduced sleep was not due to an inability to get to sleep but a lack of opportunity to sleep; they note that on days off nurses were able to extend their sleep. This finding that there is insufficient time available to sleep properly between long shifts is consistent with Basner et al. (2007) who found, via a

survey of time use in the US, that hours of sleep were linearly exchanged with hours of work and commuting time.

A Norwegian longitudinal study (Flo, Pallesen, Moen, Waage, & Bjorvatn, 2014) supported the hypothesis that limited time between shifts reduces sleep and thus increases fatigue. Flo et al. (2014) used survey data from 1224 nurses who worked a variety of shift patterns including short and long shifts. They examined data at two time points, the second a year after the first. They found that the annual number of short rest periods (11 hours or under between shifts) predicted pathological fatigue a year later, with an increase in one predicting an increase in the other.

Further cross-sectional research provides additional evidence that long shifts increase the likelihood of fatigue. Chen, Davis, Daraiseh, Pan, and Davis (2014) measured fatigue and recovery levels in the preceding months in nurses who routinely worked long shifts of 12 hours. A cross-sectional survey was used, 130 nurses participated from three acute community hospitals in the US. In line with Geiger-Brown et al. (2012) only moderate levels of inter-shift recovery were found, indicating inadequate rest between shifts. Unlike Geiger-Brown the highest form of fatigue reported was acute fatigue. Acute fatigue was defined as incapacity to do enjoyable non-work activities due to exhaustion (Winwood et al., 2005). In this study four out of five nurses experienced acute fatigue to a moderate to high degree, which has implications for nurse work life balance: an area covered in more detail below. Moderate levels of chronic fatigue were also found; with chronic fatigue defined as unrelieved mental and physical exhaustion (Winwood et al., 2005). When considering the extent to which fatigue is caused by working long hours as opposed to the burden of nursing more generally Chen et al. (2014) drew comparison with another study. Winwood, Winefield, and Lushington (2006) used the same measure of fatigue with nurses who worked short shifts, obtaining scores that were notably lower than those obtained by Chen et al. (2014). Chen et al. (2014) argued that this comparison points to longer shifts causing increased fatigue.

Two Polish studies directly compared fatigue in nurses working long or short shifts. The first was Iskra-Golec, Folkard, Marek, and Noworol (1996) who compared self-reported fatigue in 126 cardiology nurses. They found that long shift nurses reported greater levels of chronic fatigue and sleep disturbance than their

short shift counterparts. Lower levels of health, wellbeing and higher levels of burnout were also found in long shift nurses. They concluded that the increased number of rest days between shifts appeared insufficient for recovery from accumulated long days, conclusions also made by Geiger-Brown et al. (2012) and Chen et al. (2014). The second Polish study was Szczurak, Kamińska, and Szpak, (2007) who gave a questionnaire exploring activity and fatigue to 108 nurses working either eight or 12 hour shifts. They found significant activity decrease, corresponding with greater fatigue in nurses working long shifts.

***Physiological fatigue when working long shifts***

Research into long shifts using physiological measures found evidence of physiological strain (Chen et al., 2011; Thompson, Stock, & Banuelas, 2017) and so triangulate with the findings from subjective measures and activity monitoring. Thompson et al. (2017) tested physical strength (knee, wrist, hand) in 37 members of nursing staff (nurses and support workers) in the US. These tests were conducted before and after the nursing staff had worked three long shifts lasting 12 hours. Nurses performed significantly less well following their three shifts. As it was impossible to 'blind' test it is possible that expectancy effects influenced outcome, however a parallel assessment (measuring height of jumps) found no decrease in ability. On balance therefore it is likely that these results illustrate a physical effect of cumulative long shifts: performance fatigue.

Chen et al. (2011) added to this picture by focussing on energy expenditure within the shift. One-hundred-and-forty-five nurses wore devices that monitored their energy expenditure and heart rate during their first 12 hour shift following a day off (Chen et al., 2011). Nurses were recruited from the same sample as Chen et al. (2014). Energy expenditure and heart rate monitoring revealed that nurses experienced moderate physiological strain across the shift. This finding adds further detail to why insufficient rest between shifts was found to lead to concerning levels of fatigue, as rest is necessary to recover expended energy.

Of note are the forms of activity nurses performed which led to moderate strain and decreased physical performance (Chen et al., 2011; Thompson et al., 2017). These include bedside care, frequent bending and standing with equipment and supplies and infrequent lifting and transferring of patients. These activities are likely to be less common in inpatient mental health settings; particularly on working-age adult and adolescent units. In such settings physical contact may not be

related to health care and may be about managing risk through physical restraint. This form of labour is physically and often emotionally intensive and so is likely to contribute to building fatigue, possibly in a qualitatively different way to the physical fatigue of carrying out physical health care. On the other hand older adult mental health units commonly include physical care. This difference in forms of physical work illustrates how an understanding of physical health care may guide thinking in relation to mental health care, but may need to be adapted.

**Qualitative research of fatigue and long shifts.**

Studies explored so far have taken a quantitative approach, with the majority of research in this field relying on survey and observational data (Bae & Fabry, 2014; Ball et al., 2014; Harris et al., 2015). Qualitative data can be used to create a rounded and cohesive understanding of long shifts (Ball et al., 2014) in a way that is not captured using quantitative techniques. Two studies in this review relied on a qualitative data: Gillespie and Curzio (1996), who used mixed methods including interview to explore an encouraging report of long shifts; and Thomson, Schneider and Hare Duke (2017), who used a qualitative approach to examine a mixed review of long shifts which focussed on relational aspects of care.

Thomson et al. (2017) interviewed 25 support workers about their perception of working 12 hour shifts. Seven of these support workers worked in mental health (including inpatient units) remaining support workers worked on acute units (n=12), care homes (n=2) and in the community (n=4). Data was analysed using framework analysis, resulting in four categories of findings, each with subcategories. One category, chiming with the findings of quantitative studies, detailed the ‘negative impact of staff fatigue’. Support workers noted feeling tired in the final few hours of their shift. They linked this to reduced tolerance of others, reduced alertness and increased potential for making mistakes. Some support workers stated that their professionalism counteracted the impact of fatigue, however Thomson et al. (2017) sound a note of caution as to the subjective nature of this claim.

Gillespie and Curzio (1996) used mixed methods when comparing the effect of 8 or 12 hour shift on UK medical wards. Their study included semi-structured interviews with 10 nurses from two units in a hospital who had moved to working 12 hour shifts either within the preceding year or preceding two years. These nurses reported a reduction in tiredness once they moved to long shifts. Nurses explained

that this was due to working fewer shifts in a row. They were also happy with the length of handover (30 minutes). This very different report highlights the importance of multiple rest days, as when fewer, but longer, shifts are worked there are more days off in which to recover.

Gillespie and Curzio (1996)'s highly positive finding conflicts with negative findings in the multiple other studies so far explored. Two possible reasons for this positive report shall be considered. The first is that nurses were in a "honeymoon period" (Peacock, Glube, Miller, & Clune, 1983, p. 491) having transitioned to long shifts within the last year or two, and so fatigue had yet to be developed. The second is that ward staff had driven the implementation of long shifts, and were therefore highly invested in their success. Thirdly, individual factors, like commute time or having dependents, may influence the impact of fatigue. As nursing staff chose long shifts it may be that their individual situations suited such a shift pattern.

**Alcohol and fatigue.**

Alcohol consumption has been linked to managing sleep deprivation when working long shifts. One-hundred-and-eighteen shift workers (including nursing staff, but not exclusively) in Australia completed a questionnaire on alcohol intake and shift pattern (Dorrian, Heath, Sargent, Banks and Coates (2017). Those on 12-hour rotating shifts consumed more alcohol per 24-hour period and had less sleep than those working 8-hour rotating shifts. As a sedative, alcohol reduces the time it takes to get to sleep (Roehrs & Roth, 2001) and in this sense provides a practical solution to the limited time that nursing staff have to rest when working long shifts. However when consumed in larger quantities alcohol alters sleep composition (Roehrs & Roth, 2001) and when consumed beyond recommended levels is linked to over 60 chronic illnesses (Dorrian, 2012).

**Patient Safety**

Working long shifts has implications for patient safety. This is linked with fatigue, sleep deprivation and reduced vigilance and attention (Lim & Dinges, 2008). As discussed above, Geiger-Brown et al. (2012) monitored nurses during long shifts; within this they tested attention using a computer based reaction time test. They found that the majority of nurses showed moderate lapses in attention (53%) across long shifts. As there was no short shift control group for this study the extent to which lapses were due to the length of shift is unknown, however this

finding illustrated the potential for inattention during long shifts, which may lead to error, and thus potential patient risk.

Research into long shifts and patient safety benefits from a series of large US-based studies which indicated that long shifts undermine patient safety. Rogers, Hwang, Scott, Aiken and Dinges (2004) carried out a cross-sectional survey with 393 US hospital nurses, 60% of whom worked long shifts. Using logbooks they recorded fatigue and error across over 5000 shifts, with 30% of nurses reporting at least one error. They found that nurses working shifts of 12 hours and over were three times more likely to report error than those working short shifts. The response rate on this study was low (40%); potentially the research demand was offputtingly high, with participants asked to fill out their logbook each shift. It is therefore possible that the sample was biased to those more invested in the link between hours worked and safety.

Rogers et al. (2004) concluded that long hours may have negative effects on patient care; this was supported by two further cross-sectional studies in the US. Stimpfel and Aiken (2013) carried out a secondary analysis on national survey data with a large sample: (n=22, 275). They found that working shifts of ten hours and over was associated with significantly increased likelihood of reporting poor hospital safety. Trinkoff et al. (2011) took their patient outcomes a step further, including mortality measures in their selection of nationally collected data. Their sample included 633 nurses from 71 acute hospitals. They found that hospital use of shifts of 13 hours and over correlated with increased mortality rates. This final striking correlation is a timely reminder to consider the limitations of cross-sectional surveys, which are aptly placed to provide descriptive data and odds ratios but cannot show cause and effect. As is common with analyses of secondary data Trinkoff et al. (2011) were also limited by the limited scope of the data available to them and thus were unable to account for important confounders, including work environment characteristics.

The above surveys were carried out in the US where health provision is substantially different from in the UK; however, results from UK studies concur with US findings. Griffiths et al. (2014) analysed RN4Cast data collected from 12 European countries, including England. They found that those working shifts of 12 hours and over were significantly more likely to report poor patient safety. When

only UK RN4Cast data was examined the relationship between 12 hour shifts and patient safety became less powerful, moving into the non-significant range (Ball et al., 2014); although a significant relationship was found between poor quality care and working overtime. Ball et al. (2014) note that the distinction between scheduled and overtime long hours is one that is not always explicitly examined in available research.

The studies above relied on self-report, which leaves them open to social desirability. In contrast Chudleigh, Fletcher, and Gould (2005) carried out an observation study into hand hygiene, one of the most effective means of preventing infection. They observed the hand decontamination routine of 88 UK based neonatal nurses at the beginning and end of their shifts. They found a significant reduction in quality of hand washing on shifts 10 hours and over, with nurses more thoroughly decontaminating and drying their hands at the beginning of the shift than at the end. They did not detect this reduction in quality at the end of short shifts. This indicated that the extended length of shift was enough to reduce effectiveness in this straightforward and important step in safe practice.

A similar finding was obtained in another UK based observational study: Fitzpatrick, While and Roberts (1999) observed 34 nurses in their first year of registration. They used an observation scale to measure performance. They found a significant relationship between shift length and overall performance, with nurses working long shifts achieving poorer scores in subscales related to staff hygiene practice, responding to hazards to patient safety and proactive behaviour by staff.

Taken together, these studies demonstrate a relationship between longer shifts and reduced patient safety. The extent to which this finding can be transposed onto mental health care is limited. While there is overlap between physical and mental health patient safety, for example medication errors and neglect, there are also differences. Primary patient safety risks in mental health include suicide, self-injury, exploitation and violence: risks that the therapeutic relationship is mobilised to reduce. As such it is possible that long shifts may impact differently on risk in a mental health setting.

## Job Satisfaction

Research into the impact of long shifts on job satisfaction appeared to have varied findings. A number of large cross-sectional studies found increased likelihood of burnout and dissatisfaction in nurses working long shifts compared with short shifts (Dall'Ora, Griffiths, & Ball, 2015; Stimpfel, Sloane, & Aiken, 2012). Smaller observational and questionnaire based studies had conflicting findings, making an unclear picture; for example finding dissatisfaction with long shifts due to interference with childcare (Todd, Robinson, & Reid, 1993) versus satisfaction with long shifts due to improvements with childcare (Bloodworth, Lea, Lane, & Ginn, 2001).

### Job dissatisfaction and long shifts.

Harris et al. (2015) included 31 studies into staff experience of long days in their scoping review. They found that most studies concluded that nursing staff preferred long days and/or the option to work long days. Seven studies were selected by Ball, Maben, Murrells, Day, and Griffiths' (2015) more exacting systematic literature review; their conclusion was less forthright, stating that the findings in relation to job satisfaction were mixed.

Secondary analyses of large national and international data sets suggests that staff satisfaction and wellbeing is negatively associated with working long shifts. Dall'Ora, Griffiths, & Ball (2015) used data from the RN4Cast study. This covered 12 European countries including ~32,000 nurses. They found that shifts of 12 hours and over worked by hospital nurses were associated with increased reports of burnout, job dissatisfaction, dissatisfaction with work schedule flexibility and intention to leave. When only RN4Cast UK data was analysed nurses working long shifts continued to be less likely to report being satisfied with their job (Ball et al., 2014). Stimpfel, Sloane and Aiken (2012) came to similar conclusions in their secondary analysis of data from over 22,000 nurses in four US states. They found that nurses working long shifts of 10 hours and over were up to 2½ times more likely to experience burnout, job dissatisfaction and intent to leave than nurses working shorter shifts.

A UK health authority moved from eight to 12 hour day shifts in the late 1980s. This transition, across 10 wards in two hospitals was carefully recorded by Todd, Robinson and Reid who published a series of studies into various elements of

this transition (Reid, Robinson, & Todd, 1993, 1994; Reid, Todd, & Robinson, 1991; Todd, Reid, & Robinson, 1989, 1991; Todd, Robinson & Reid, 1993). As with the large cross-sectional studies their conclusions were not favourable. In an exploration of staff satisfaction (Todd, Robinson & Reid,1993) using a repeated measures design, 320 nurses were given a questionnaire one month prior to starting long shifts and 6 months into long shifts. Nurses reported reduced satisfaction when working long shifts; they found them to interfere with social and leisure time, childcare and domestic duties, findings supported by (Kundi et al., 1995). When nurse characteristics were explored it was found that older nurses were more likely to dislike long shifts, and also more likely to live further from the hospital and have dependants.

**Job satisfaction and long shifts.**

In a study by Todd, Robinson and Reid (1993) the move to long shifts was imposed by management; by the end of the study 83% of nurses stated that they would prefer to return to short shifts. In comparison (Bloodworth et al., 2001) studied a move to long shifts in which nurses volunteered to trial a mixed shift pattern, of two 12 hour shifts and two 6¼ hour shifts a week. This study found greater levels of nurse satisfaction. Twenty-three nursing staff and therapists working on a UK acute ward for older people took part in the trial. They were given a questionnaire created for the study by the authors at the end of the four months. Among the positive responses staff reported increased flexibility, greater ease of childcare, management of social and family time and increased number of days off. In addition to the un-validated measure, a limitation of this study was the proximity of those researching to participants, with senior sisters on the unit instigating and conducting the research, leading to potential for bias.

Further studies reported positive nursing staff outcomes from long shifts. McGettrick and O'Neill (2006) gathered data from 54 critical care nurses in one large UK hospital. From their self-made questionnaire and follow up focus group, nurses reported that long shifts benefitted family life through being flexible and increasing time at home. Similarly Gillespie and Curzio (1996) used questionnaires and interviews with 50 UK nurses to find favourable views of extended leisure time created by long shifts. Iskra-Golec et al. (1996) found less social and domestic disruption reported for long days than short.

Richardson, Turnock, Harris, Finley and Carson (2007) gave questionnaires to 147 members of staff working long shifts across three units in one UK hospital; they also conducted a focus group. Like Iskra-Golec et al. (1996) they found, alongside reports of fatigue, a positive effect on work-life balance was described with good quality time off work and ease of travel to work. This conclusion was echoed by Crew's (2006) small (n=6) qualitative study of UK shift workers (of various lengths) from different professions which highlighted the advantage of a series of days off and having time off during the working week *'You can... get to places when they are open without masses of crowds being around and relying on the weekend. You often have more days off in the week than you would if you did a nine-to-five job; you can get extra holidays if you are working shifts'* (Registered nurse, p. 31).

Reasons for job satisfaction given so far have focussed on positives in the home life of nursing staff, they have included: increased flexibility, greater ease of childcare, improved management of social and family time, increased number of days off and ease of travel to work. Thomson et al. (2017)'s qualitative interviews with 25 support workers found reasons for job satisfaction relating to factors at work. One of their categories was 'satisfaction with performance through continuity of care'. Support workers spoke of being given a sense of ownership over their work and control over their tasks by being present for 12 hours at a time. They also shared a sense of achievement from working hard for 12 hours and getting their tasks done.

**Why the difference in job satisfaction findings?**

When undertaken with grassroots support, working long shifts was self-reported by nursing staff to improve job satisfaction (Bloodworth et al., 2001; Dwyer, Jamieson, Moxham, Austen, & Smith, 2007; Gillespie & Curzio, 1996; Richardson, Dabner, & Curtis, 2003). However, large cross-sectional studies have reported the opposite direction of association. The first of these was Stimpfel et al., (2012) who used US data from 22,000 nurses, and the second Dall'Ora et al. (2015) who used European data from 32,000; both found a relationship between long shifts and increased job *dis*satisfaction. Data collection for these large studies did not focus solely on the impact of long shifts, but rather a wide variety of work related factors. There appears to be a mismatch therefore between perceived satisfaction with long shifts and measured satisfaction with long shifts when the relationship between shift length and satisfaction is not made explicit. This discrepancy was

further illustrated in Stimpfel et al. (2012) and Ball et al. (2014) whose results showed that alongside increased job dissatisfaction with long days most nurses said they were satisfied with their schedule.

Stimpfel et al. (2012) suggested that this contrary result is due to nursing staff underestimating the impact of long days due to the appeal of a three day week, a theory also proposed by Fitzpatrick, While and Roberts (1999). Dall'Ora, Griffiths, & Ball, (2015) suggested that nursing staff may not be able to readily pinpoint the negative effects of long days due to their cumulative nature. Finally, Ball et al. (2014) suggested that an over-reliance on cross-sectional data oversimplifies the complex factors that nursing staff draw on in making their judgements around long shifts and job satisfaction; they recommended that qualitative studies be utilised to create a more cohesive understanding of the experiences of nursing staff working long shifts. Thomson et al. (2017)'s qualitative findings certainly added another angle to understanding why long shifts may be appealing to nursing staff, by illuminating the job benefits in addition to benefits from time off.

## Quality of Care

In addition to fatigue, job satisfaction and patient safety, research has explored long shifts and quality of care. As with job satisfaction there are a variety of findings as to whether long shifts improve or reduce quality of care with large cross-sectional surveys finding negative trends, while smaller studies have mixed reports. Generally if a study found positive associations with long shifts and job satisfaction it also came to positive conclusions regarding quality of care and vice versa.

### Long shifts and reduced quality of care.

Cross-sectional surveys have found that quality of care is negatively associated with working long shifts (Griffiths et al., 2014; Stimpfel & Aiken, 2013). Griffiths et al. (2014) also found that working long shifts predicted greater levels of work left undone, including patient surveillance, documentation, medication administration and talking with patients.

In their research following the move of ten units to long shifts, Todd, Reid and Robinson (1989) observed nurses' quality of care on two units one month before

and six months into long shifts. They found that following long shifts, nurses achieved poorer scores for planning and evaluating care as well as for providing psychological care. Furthermore an activity analysis on ten units found a significant reduction in direct patient care following the introduction of long shifts (Reid, Robinson and Todd, 1993). These findings correspond with reports of lower staff satisfaction (Todd, Reid and Robinson, 1993). These undesirable findings may relate not only to moving to long shifts, but also the way in which they were imposed on nurses by managers.

**Long shifts and improved quality of care.**

In comparison Dwyer, Jamieson, Moxham, Austen and Smith (2007) studied an Australian intensive care unit in which 19 nurses volunteered to trial 12 hour shifts. After three months they completed questionnaires designed by the researchers. The questionnaires demonstrated widespread acceptance of long shifts; among reported positives were 'increased continuity of care' and 'extended opportunities to complete tasks'. A caveat to this finding is the design of the questionnaires, which used only positively framed questions, for example rating statements like "I feel the 12-h is a good retention strategy" and "continuity of care has improved" (p. 715) with no negatively framed questions to counterbalance these, such as 'there is a reduction in continuity of care'. This leaves Dwyer et al. (2007)'s research vulnerable to acquiescence bias (Watson, 1992) and thus positive findings may not be as strong as they appear.

One of the categories found in Thomson et al. (2017)'s qualitative analysis of support worker interviews was 'benefits of long shifts to patients through continuity of care'. Support workers reported that fewer handovers meant fewer opportunities to miscommunicate information and more time for hands-on care. Support workers who worked in mental health settings spoke of long shifts creating the opportunity to complete care related tasks within a shift, these included therapeutic activities with patients, phone calls and keeping notes.

The therapeutic relationship is known to positively impact care outcomes (McGuire, McCabe, & Priebe, 2001), and it is therefore important when considering quality of care, especially when considering care in mental health settings where the therapeutic relationship is a central mechanism for change (Thomson et al., 2017). Richardson et al.'s (2007) UK questionnaire and focus group found that nurses

reported improved relationships with patients and patients' relatives when working long shifts, as did Lea and Bloodworth's (2003) nurse questionnaire study. Support workers spoke positively of long shifts and the therapeutic relationship, in particular those working in mental health settings reported that long shifts built rapport, trust and understanding (Thomson et al., 2017). They compared the continuity of long shifts with patients experiencing a "kaleidoscope of faces" (p.534) when nursing staff worked short shifts.

**Crossover.**

When a short shift pattern is used there is a period of time in the middle of the day when the unit has a double complement of nursing staff (Sprinks, 2012). Typically this period is used to facilitate additional time with patients (often not task-oriented), staff training and appraisal, supervision, unit meetings and comprehensive handovers (Ball et al., 2014; Sprinks, 2012): all activities that may contribute to quality of patient care. While largely positive about their move to long shifts, surveyed nurses in McGettrick & O'Neill (2006) highlighted reduced crossover as a negative, noting reduced time for clinical education. This report was supported by Reid et al. (1991), who observed nurses every 15 minutes for three days pre- and post- the move to long shifts. They found that student nurses working with registered nurses had educational interaction during 50% of short shifts but only 16% of a long shift. A midday peak in educational activity was noted on the short days, it is likely that this was made possible by crossover.

**Quality of care summary.**

As with staff satisfaction there are a variety of narratives about the impact of long shifts on patient quality of care. Large cross-sectional studies find cause for concern, while the report of nursing staff in smaller studies tends to be positive, except where long shifts were forced upon nursing staff. A loss of cross-over when units move to long shifts may have an impact on quality of care.

## Moderating Factors

Personal and organisational factors influence the experience of working long shifts (Dall'Ora & Griffiths, 2017). As the majority of research has taken a quantitative approach there has been difficulty identifying such factors as it is likely that they interrelate in a complex way (Ball et al., 2014) that is initially difficult to tease apart. For example while Chen et al. (2014) identified a significant interaction

effect between fatigue and hospital type they did not have the data to enable them to theorise why this may be. Taking a qualitative approach, Thomson et al. (2017) found that support worker perception of working long shifts could only be understood within the wider context of the role. They summarised these factors as "moderating factors" these are itemised in Table 1. Moderating factors included how well shifts were staffed, how many were worked in a row, the intensity of demands, whether breaks were available and how experienced the support worker's teammates were. Thomson et al. (2017) described a combination of moderating factors leading to different perceptions of long shifts: 'good long shifts' were characterised by flexibility in the rota, sufficient staffing to meet demands and allow breaks and a positive team climate in which colleagues supported each other to complete tasks. Conversely 'bad long shifts" were characterised by inflexible rotas, insufficient staffing, missed breaks and a negative team climate.

Table 1: *Moderating factors from Thomson et al. (2017)*

| **Moderating Factors** | |
|---|---|
| Number of consecutive shifts | Three long shifts in a row were reported to create a build up of fatigue. A minimum of 2 days off was reportedly necessary to recover from tiredness and fatigue. |
| Control over shifts | Participants appreciating having the option to work short shifts; recognising that this would be determined by family situation, commute and personal preference. Staff working a flexible rota were positive about self-rostering to increase flexibility, a dislike of enforced shift pattern was apparent. |
| Intensity of work demands | Particular demands were linked to how tiring the shift was. Caring for dementia patients on acute wards was given as an example of higher physical and psychological demands. |
| Team composition | Low staffing and use of bank staff was linked to an increased workload for participants and thus greater fatigue. Working as part of a well staffed, well managed team protected against potential negatives of long shifts. |

| | |
|---|---|
| Ability to take breaks | Breaks were used for rest, to rehydrate and to eat; they were reported as valuable for preventing fatigue. Participants in mental health and acute settings reported particular dissatisfaction in their ability to take breaks, with staff shortage and high levels of demand at work standing in the way. |

**Breaks.**

Quantitative research supports Thompson et al. (2017)'s report that breaks were valuable for preventing fatigue (Ball et al., 2014; Dall'ora, Griffiths, Ball, & Recio Saucedo, 2016). Chen et al. (2011) observed that nurses working long shifts that took fewer breaks reported a higher perceived workload. As a correlational observation this may indicate that these nurses did have more work, or that not taking a break made it harder to see the bigger picture. In their literature review of shift work characteristics (Dall'ora et al., 2016) concluded that timely breaks reduce fatigue; this conclusion was based on four studies, two in the field of nursing. They also highlighted that existing research has not captured the quality of breaks (i.e. what people do during their time off during and between shifts) and that this could be crucial in understanding the relationship of breaks with fatigue. The importance of breaks is of particular significance as missing breaks is common in nursing. In a recent survey of 7720 UK nurses 90% reported working through their breaks at least some of the time and 60% that they almost always worked through (RCN, 2017). This was a particular problem in Mental Health; nurses working in mental health settings reported working through their breaks more than any other setting (RCN, 2017).

The use of informal breaks to manage energy across long shifts was also noted. Todd, Robinson, & Reid (1993) described a "pacing effect" during a 12-hour shift when they observed activity across 10 NHS units. They noted that those working long shifts increased their unofficial breaks and reduced the time that they spent with patients compared to those working 8-hour shifts. This finding was supported by Chen et al. (2011) who noted that pace of work decreased at 3pm during long shifts, they theorized that this was to preserve energy for the busier hour at the end of the shift.

**Individual characteristics.**

It is likely that individual characteristics also influence the experience of long shifts. Chen et al. (2014) found that younger nurses showed lower levels of fatigue than older nurses, however this was confounded by poor health in the older sample. They also found that weekly exercise correlated with lower fatigue and improved recovery scores. Geiger-Brown et al. (2012) noted differences in sensitivity to sleep loss; while a third of the nurses in their study reported high levels of fatigue two thirds did not. They found that nurses that were divorced or widowed were significantly more likely to report inter-shift fatigue than those who were single or married. Finally Chen et al. (2011) found evidence that family responsibilities at home exacerbated negative impacts of long shifts.

**Job-Demand-Control-(Support) Model**

The Job-Demand-Control model (Karasek, 1979) may be used to aid understanding of the impact of long shifts on nursing staff. This proposes that two work factors are the principal components that influence an individual's physical and mental wellbeing in response to work. These factors are job demand and job control. Job demand includes workload, time pressure and work conflicts that lead to physical and emotional demand (Karasek, 1998). Job control is the extent to which the individual is able to control their work-related activity. This is subdivided into 'skill discretion', the opportunity to use specific work skills and 'decision authority', an individual's autonomy, the extent to which they can decide when and how to do their job.

Karasek (1979) proposed that people who work in jobs with high demands and low control are at most risk of reduced physical and mental well-being, this is called a 'high strain job'. Conversely those whose work makes low demands and who have high control are unlikely to be at risk. This model fits well with the characteristics that make up Thomson et al. (2017)'s 'good' and 'bad' long shifts.

This model may also be used to make sense of the varied findings of small studies that followed nurse transitions from short to long shifts. In Todd et al. (1993) nurses were forced to change to long shifts, demonstrating very limited decision authority. In Bloodworth et al. (2001) and Dwyer et al. (2007) nurses could opt to trial long shifts, demonstrating significant decision authority. Of the three transitions it is only Todd et al. (1993) that reported comprehensively negative outcomes. In

this comparison therefore job control is likely to be a contributing factor to positive outcomes. There are two ways to conceptualize this according to the JDC. Either control 'buffers' the job demands, limiting their impact ("Buffer Hypothesis", Van der Doef & Maes, 1999); or lack of control increases strain alongside job demand strain ("Strain Hypothesis", Van Vegchel, De Jonge, & Landsbergis, 2005), in this case it is likely to be the latter.

The JDC highlights the impact of job demands on the experience of work. This is of relevance when considering the difference between general and mental health nursing. Thomson et al. (2017), who interviewed support workers from multiple units, noted that support workers who worked with dementia and delirium reported particularly high work demand. This observation was supported by a UK survey of 7720 nurses (RCN, 2017). Nurses from 19 setting and representing 16 specialities were surveyed about workload. Mental health nurses reported the highest rates of experiencing verbal (85%) and physical (47%) abuse from patients in the preceding 12 months and nurses working in mental health settings were the most likely to miss breaks (46%). This intensity of work is likely to impact the experience of working long shifts.

Johnson and Hall (1988) added a third dimension to the JDC model: 'social support', thus creating the Job Demand Control Support Model (JDCS) illustrated in Figure 1. They proposed that high social support at work is related to more positive wellbeing while low social support leaves the individual at risk of poor wellbeing. Like control, social support can be theoretically understood as simply contributing to the level of strain or mediating as a buffer. This resonates with Thomson et al. (2017) and highlights the impact colleague relationships may have on outcomes in long shifts.

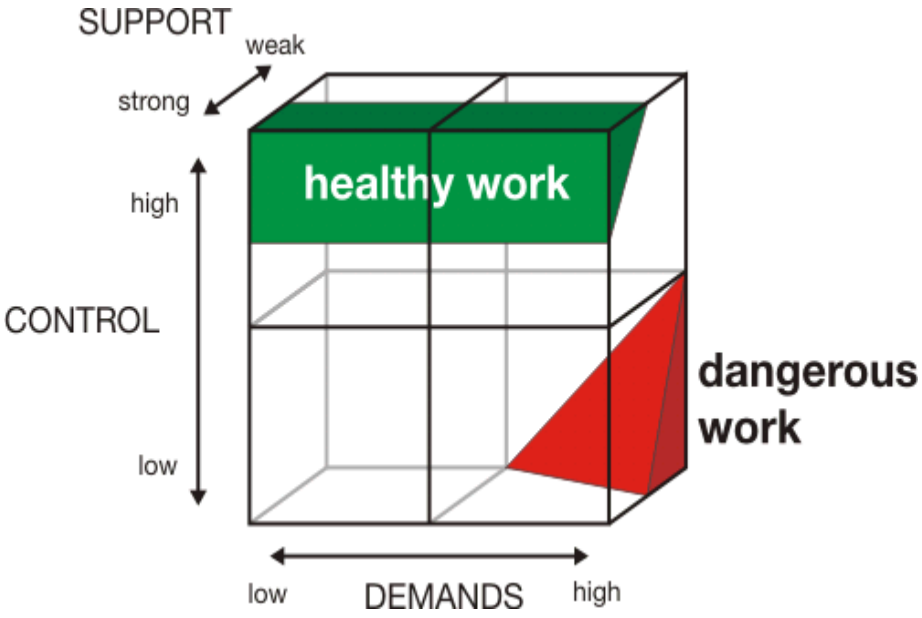


Figure 1: *Representation of the Job-Demand-Control-(Support) Model (Johnson & Hall, 1988) figure taken from Aborg (2008)*

**Therapeutic Relationship**

The therapeutic relationship is important in all forms of nursing; and in mental health nursing it is the core of practice (Dziopa & Ahern, 2009). The additional emphasis on the therapeutic relationship in mental health care may lead to a different experience in the use of long shifts compared to general health.

There is no one clear model of the therapeutic relationship, as it is formulated from multiple theoretical backgrounds, including psychoanalytic theory, social constructionism, systems theory, role theory and social psychology (McGuire, McCabe & Priebe, 2001). Goals of the therapeutic relationship within the mental health nursing context have been defined as:

- **Facilitating** communication of distressing thoughts and feelings.
- **Assisting** clients with problem solving to help facilitate activities of daily living.
- **Helping** clients examine self-defeating behaviours and test alternatives.
- **Promoting** self-care and independence. (Varcarolis, 2005)

The therapeutic relationship is understood to be a vital part of mental health nursing and is positively associated with outcomes in a range of mental health

settings (McGuire et al., 2001). Multiple factors make up a good quality therapeutic relationship. Prominent among these are the three Rogerian principles (Rogers, 1959); genuineness, empathy and positive regard. Within a therapeutic relationship nursing staff use their emotions for the growth and benefit of their patient, with the focus of interaction on the patient's needs (Varcarolis, 2005). This conscious management and expression of emotions is termed "emotional labour" (Hochschild, 1983). It is a high-level competence that requires perseverance, with nursing staff needing at times to supress or induce emotions, which can lead to work stress (Badolamenti, Sili, Caruso, & FidaFida, 2017). Within the JDCS model emotional labour fits within job demands.

Through patient interview (Forchuk & Reynolds, 2001) and nurse interview (Forchuk et al., 2000) factors were identified that help and hinder the creation of a therapeutic relationship between mental health nurse and patient. Helping factors included consistent interactions between nurse and patient (of a regular length, format and location) as well as the patient setting the pace, as this promoted patient comfort and balanced control within the relationship. Hindering factors included inconsistency, unavailability and infrequent meetings.

There are multiple ways in which long shifts may impact on the formation and maintenance of the therapeutic relationship. Among these are the practical implications of working fewer days, which may be in an irregular pattern. This has implications for consistency, pacing and control in the relationship between a key worker and client. The impact of shift patterns on consistency is noted by clients (Johansson & Eklund, 2003) with consistency contributing to the development of trust (Yee Man Poon, 2014).

**Summary**

Studies into the use of long shifts and fatigue, job satisfaction, patient safety, quality of care and modifying factors have been reviewed. Findings were mixed for fatigue, job satisfaction and patient quality of care, with some studies finding that long shifts were detrimental and others that they were advantageous. Regarding patient safety, the research reviewed indicated that safety was reduced when long shifts were used. Of note was that recent large cross-sectional studies using survey data reported adverse effects (Ball et al., 2014; Griffiths et al., 2014; Stimpfel & Aiken, 2013; Trinkoff et al., 2011) while the results from smaller observational and

questionnaire based studies were mixed (Bloodworth et al., 2001; Chudleigh et al., 2005; Dwyer et al., 2007; Fitzpatrick et al., 1999; Gillespie & Curzio, 1996; Iskra-Golec et al., 1996; Lea & Bloodworth, 2003; McGettrick & O'Neill, 2006; Reid et al., 1991; Richardson et al., 2007). Smaller studies were influenced by factors unique to themselves (for example break length or availability of peer support) and thus varied findings may be indicative of the influence of moderating factors, which may be less apparent in larger surveys. Furthermore there was potential that the "honeymoon period" (Peacock et al., 1983) was an effect, with recent moves to long shifts likely to be viewed favourably, particularly when the long shift pattern was chosen by nursing staff.

In the literature reviewed, there were no randomised control trials and qualitative studies were few. This representation of research was in line with the broader literature and the observations of systematic and scoping reviews (Bae & Fabry, 2014; Ball et al., 2014; Harris et al., 2015) with survey, observational and questionnaire data relied upon. In light of the lack of qualitative research it was proposed that use of an in-depth qualitative approach would aid in understanding the variety of results found in current research; with Ball et al. (2014) stating "the picture is likely to be much more complex than a mean satisfaction score can illuminate" (p. 37). Thomson et al. (2017)'s qualitative approach provided unique and informative data, illustrating that such an approach was valuable.

Reviewed literature illustrated that very few studies had included mental health nursing staff and none focussed specifically on the unique characteristics of working long shifts in mental health services. Therefore the focus of this research was to explore the experience of nursing staff working in inpatient mental health settings.

**How the reviewed literature informed the topic guide.**

Areas covered in the topic guide (Table 2) were decided in the light of the literature review. The literature review explored fatigue, patient safety, quality of care, job satisfaction and moderating factors. A common thread through all the research reviewed was the importance of understanding nursing staff experience of working long shifts: cognitively, emotionally and physically, across the shift. From literature on fatigue, the exploration of time management, relationships with patients and how nurses used their time between shifts, was included in the guide. From

literature on quality of care, examining how care needs were met across the long shift, continuity of care, meeting therapeutic needs and loss of crossover, were included. Varied findings in the literature on staff satisfaction and patient care brought focus in the topic guide to how nursing staff balance the costs and benefits of working long shifts. Areas covered in the topic guide, to explore this balance, included: how nursing staff compared past and current experience, their opinions on the ideal working pattern and the positive and negative effects of working long shifts on home and work life. Finally, literature on moderating factors highlighted the need to consider a variety of areas, including the quality of and access to breaks, team dynamics (including supervision and relationships with colleagues), working patterns and individual characteristics including care commitments.

**Research Aim**

This research aimed to address absences in the current knowledge of working long shifts in mental healthcare:

1) To explore nursing staff experiences of long shifts in mental health settings;

2) To explore nursing staff views of the impact of long shifts on their wellbeing and patient care;

3) To explore factors which nursing staff think alter the impact of long shifts on wellbeing and patient care.

# Methodology

This chapter describes the methodological foundation of this thesis. Different methodological options shall be described and the explanation given for which is chosen. This begins with the paradigm that underpins the research before funnelling down into the approach taken; type of data collected; mode of data collection; sampling; recruitment and finally choice of data analysis.

## Research Paradigm

Research paradigms are ways of understanding the world that underpin decisions made when designing and interpreting research (Bryman, 2004). Three prominent research paradigms were considered: post-positivism, constructionism and pragmatism. Traditionally there were two principle opposing paradigms: post-positivism and constructivist (Tashakkori and Teddlie, 1998), which were characterised by their philosophies of ontology (what is reality), epistemology (how is something known), and methodology (how what is knowable is discovered).

A post-positivist stance grew from positivism (Bridgman & Physicien, 1927), stating that there is an objective truth, although this truth could only be known imperfectly as bias, whether cultural or personal influences the outcomes of research (Clark, 1998). A central mechanism of post-positivism is "falsifiability", the understanding that in order to get close to objective truth false hypotheses must be rejected (Popper, 1963). Therefore falsifiable hypotheses are proposed and experiments carried out to see if the null hypothesis is accepted or rejected. In this way a post-positivist paradigm classically leads to a quantitative approach and the use of experimental and survey methodologies.

In contrast the constructivist paradigm states that there is no single reality or objective truth (Berger & Luckmann, 1966), rather that reality is created by groups of individuals. As there is no true reality it cannot be measured, instead researcher interpretation is used to gain an understanding the underlying meaning of phenomena. Constructivists therefore traditionally make use of qualitative approaches, interviewing and observing people to gain an understanding of their

experiences and beliefs, with awareness that the researcher's beliefs are intrinsically part of their findings.

Pragmatism, or the "third way" (Armitage, 2007) was the final paradigm considered. This paradigm gained strength as a response to the philosophical chasm between post-positivism and constructionism (Gage, 1989). The different ontological stances of these two paradigms caused a practical difficulty for researchers who wanted to make use of both qualitative and quantitative approaches while having a consistent philosophy to underpin their research (Cherryholmes, 1992). Pragmatism provided this, by approaching research philosophy from a different angle. It queried the usefulness of choosing one ontological stance over another, as it cannot be definitively know which is closer to the truth; it asserted that the post-positivist and constructivist views of the world were equally important and could be seen as two sides of the same coin (Dewey, 1938; Goldkuhl, 2012)).

Pragmatists stress that the research question and surrounding circumstances influence which approach is more useful and so a pragmatic theory of knowledge could be described as 'what is true is what practically matters' ( Williams, 2016, p. 174). Thus, for pragmatists when deciding how to discover new information the emphasis is moved from theory of knowledge to finding an approach that suits the nature of the research question (Creswell & Creswell, 2017). Pragmatists also interrogate the value judgements that lie behind their methodological decisions as they view research as inherently moral, and political (Denzin, 2010). The pragmatic researcher uses a method that appears best suited to their research problem, they 'do what works' (Morgan, 2014), as such qualitative and/or quantitative approaches are available to them. This practical approach in reality is one that is widely used by researchers, whether purporting to be pragmatist or not, who make decisions on whether to take a post-positivist or constructionist stance based on which design would best fit their question and not philosophical allegiance (Darlington & Scott, 2002).

In light of the above, the design of this research was built on a pragmatic foundation, with decisions about the methodological approach and method made based on what the researcher and supervisors deemed the most useful way forward in light of existing knowledge and resources.

**Quantitative or qualitative approach.**

Taking a quantitative approach was considered. This had the benefit of providing data that was straightforwardly comparable to the body of existing observational research. A project coordinated by the University of Leeds had access to staffing and incident data from five NHS Mental Health trusts, which could be made available for this study within the necessary timeframe. There were two principle drawbacks to this approach, a practical barrier and a theoretical question. The practical barrier related to the way in which data was anonymised which would make identifying informal long hours (working two short shifts together) impossible.

While there is a pre-existing body of research into the impact of long shifts in general nursing this is not the case for mental health nursing. Rather than immediately measuring the impact of long shifts a more meticulous approach would be to create a foundational understanding of the experience of long shifts in mental health, from which hypotheses suitable for using quantitative research designs could subsequently be created.

If a quantitative approach were taken in response to existing research then this would be built on an assumption that general health nursing is sufficiently similar to mental health nursing to guide decisions about which areas to measure. It was decided that this assumption would be premature and research that contributed to the creation of future hypotheses about what to measure in mental health care would be more valuable. Therefore a qualitative approach, which aimed to understand the human experience through the perceptions of those having the experience, was deemed more suitable.

Qualitative approaches are used to gather rich written or verbal data, which is then analysed to create a rounded understanding of examined phenomena (Mason 2002). Measurable hypotheses may then be created from these rounded understandings to inform future quantitative research (Curry, Nembhard & Bradley, 2009). This study explores a complex phenomenon; research, highlighted in the above review, shows that the experience of long shifts is multi faceted, influenced by organic, relational and systemic factors. Qualitative approaches are well matched to this, with various methods supporting exploration of complex data (Sofaer & Firminger 2005; Curry, Nembhard & Bradley, 2009). As part of capturing detailed

descriptions of individual perceptions qualitative approaches can explore how factors interact, in the case of this study how colleague dynamics and organisational culture interact with individual's work and the quality of care they offer (Sofaer, 1999; Malterud, 2001). Therefore the qualitative approach was chosen, as its exploratory nature fit with the absence of research into mental health care and long shifts.

## Data Collection

Three techniques were considered for gathering the rich data required for qualitative analysis: asking nursing staff to keep reflective diaries while on shift, holding focus groups or conducting individual interviews. These approaches shall be briefly described and the explanation for selecting interviews given.

### Diary.

Asking workers to keep diaries while on shift is a well-used technique in shift work research (Symon, 1998), with shift workers asked to monitor areas such as, breaks, mood and energy across working days (e.g. Williamson, Gower, Clarke, 1994). Participants would be encouraged to record in their diary during the shift, thus temporal accuracy and reduced reliance on memory is an advantage of diaries (Willig, 2008). Keeping a diary however alters shift routine, so while what is recorded may be accurate it may not be representative of typical shifts. Critically, studies that use diaries report low recruitment and high attrition rates relating to the time required to maintain the diaries (Willig, 2008). Reports of nurse wellbeing in the NHS highlight workload related stress, linked to chronic understaffing (Flynn, 2016). It was anticipated that recruiting already burdened nursing staff would prove problematic and that adding to staff workload by introducing diaries during shifts may increase stress. It was therefore decided to collect data outside of the shift and so not to use a diary.

### Focus group.

Focus groups provide an opportunity to gather verbal data outside of working hours. A typical focus group consists of around six to eight people who meet for up to two hours (Ritchie, Lewis, Lewis, Nicholls, & Ormston, 2013). A skilled researcher makes use of group process and dynamics in a focus group to generate unique insights (Bryman, 2012). Participants reflect on their views in light of the views of others, they seek clarification, comment on what they have heard and

encourage each other to reveal more; leading to the creation of rich data (Berg & Lune, 2012). To facilitate open discussion groups are typically made up of people unknown to each other, however for studies relating to organisational practice it is common that colleagues are in the same group (Ritchie et al., 2013). Consideration of who would be in the groups would be needed, for example whether nurses, student nurses and support workers would be in the same group as the hierarchy inherent between their roles may reduce the likelihood of an open discussion (Ritchie et al., 2013). Furthermore confidentiality agreements would be particularly important if colleagues made up the focus groups (Krueger, 2014).

When compared to individual interviews focus groups have been found to produce more sensitive disclosures of a personal nature (Guest, Namey, Taylor, Eley, & McKenna, 2017; Rat et al., 2007) likely due to peer environment encouraging disclosure. Interviews however are regularly found to offer a wider breadth of items (including problems, issues, needs, factors) than focus groups (Fern, 1982; Guest et al., 2017; Heary & Hennessy, 2006; Rat et al., 2007), this fits with the observation that they produce greater insight into individual's thoughts, feelings and world view (Knodel, 1993). Focus groups are also more difficult to schedule, particularly with busy clinicians, and take twice as long to carry out (Guest et al., 2017). It was also considered that organising focus groups around long working hours and across large geographical areas would be problematic (Ritchie et al., 2013).

**Individual interview.**

Due to the practical considerations covered above, and in pursuit of breadth of data, the individual interview approach was chosen. Interviewing is a powerful and popular way of generating descriptions and interpretations of individual's worlds (Ritchie et al., 2013). There are various levels of interview, interview surveys, in-depth and unstructured. Highly structured survey interviews collect data that may be analysed quantitatively. They are closely controlled by the interviewer, allowing only limited responsiveness participants (Bryman, 1992) and hindering the depth of material gathered (Ritchie & Lewis, 2007). On the other end of the spectrum unstructured, explorative, interviews follow the path dictated by the participant. Between survey and explorative interviews lie semi-structured in-depth interviews. The in-depth interview allows for systematic exploration of specific phenomena while leaving space for depth of participant experience (Ritchie et al.,

2013) this balance approach was selected for this research. It is a useful and flexible approach, which allows the researcher to immediately follow up an area of interest that the participant may introduce (Cormack, 2000).

**Mode of Interview**

Once in-depth interviews were chosen the mode in which they were conducted was decided. Two options were considered: face-to-face interviews; and interviewing over the phone.

**Face to face.**

In a face to face interview the interviewer is with the participant and so may receive and make use of all forms of communication including non verbal feedback (Creswell, 1998; Opdenakker, 2006). This has a measurable impact on the interview experience, with face-to-face interviews containing longer periods of silence than phone interviews, as non-verbal communications are used in addition to verbal communication (Holbrook, Green, & Krosnick, 2003). This closeness has been linked to creating a more intimate atmosphere in which sensitive information may be shared (Creswell, 1998). When interviews are face-to-face the researcher also has a level of control over the setting and can therefore endeavour to create a confidential and quiet shared environment (Opdenakker, 2006).

**Telephone.**

Historically there is a bias against telephone interviewing due to the absence of visual cues (Novick, 2008). Cachia and Millward (2011) argued however that phone conversations are a "crucial part of our societal communication fabric" (p.272) and as such people have learned to communicate precisely and effectively without visual cues. Holt (2010) noted that non-verbal communication is successfully replaced in telephone interviews with utterances of verbal encouragement (e.g "ah""mmhmm"). Furthermore the structure of a day-to-day phone call (agenda driven, initiated by the caller) is not dissimilar to an interview and thus the interviewee may readily habituate to an interview format (Cachia & Millward, 2011; Vogl, 2013). Note taking can be very distracting to participants (Miller 1995); over the phone this is not visible (Sturges & Hanrahan, 2004). Furthermore, in repost to Creswell (1998)'s theory that face to face interviews create an atmosphere in which participants are more open, increased perception of

anonymity (Greenfield Midanik & Rogers, 2000) can also enable participants to be open.

There are multiple practical benefits of telephone interviews. They enable the researcher to reach people that otherwise would be too far away, as interviews are not constrained by the prohibitive cost of transportation and time (Shuy, 2002). Removing travel would also make booking an interview alongside other commitments easier (Fenig, Levav, Kohn, & Yelin, 1993; Oltmann, 2016) and short notice cancellations would have less impact as neither party would have travelled unnecessarily to a mutual destination (Farooq & Villiers, 2017; Oltmann, 2016).

Telephone interviews were chosen for this study as it meant that data could be obtained from participants working in multiple trusts and thus a broader range of experiences would be heard. The flexibility of telephone interviewing was deemed particularly advantageous for arranging interviews around shift work.

## The Sample

The population of interest consisted of people with experience of working long shifts in nursing on inpatient mental health units. This was a varied population; people who work in nursing may be qualified nurses, who have trained for years specifically for their role, student nurses or support workers who may have no specialised training. Qualified and unqualified roles have different quantities of responsibility, patient contact time, remuneration and skill. Roles also vary based on the patient group. For example the needs of a patient on an older adult unit may be quite different from the needs of patients in inpatient forensic child and adolescent mental health services (CAMHS). Within the wider population of interest a more specific sample universe was defined, with inclusion criteria to determine who may be included in the study and exclusion criteria to determine who cannot be included (Robinson, 2013).

### Homogenous Sample

The more specific the inclusion and exclusion criteria the more homogenous the sample universe. For example inclusion criteria may specify that participants must be qualified nurses, work on a specific type of inpatient unit and that their experience must be current. The theoretical alignment of some methods, like interpretive phenomenological analysis (IPA) lead to their favouring a homogenous sample (Flower, Smith & Larkin, 2009). This is because an in-depth understanding

of a highly specific population may be distilled from a homogenous sample. A limitation of the homogenous universal sample is that the specificity of findings to a particular time, place or group means that they are not readily generalizable.

Heterogeneous Sample

Broad inclusion criteria and fewer exclusion criteria would lead to a more heterogeneous sample universe, making it possible to capture the breadth of experiences in the population of interest. The theoretical alignment of approaches like grounded theory favour a heterogeneous sample (Strauss & Corbin, 1998). A heterogeneous sample is likely to find more generalizable phenomena than a homogenous sample. For example experiences shared within a diverse group are more likely to be shared more generally (Robinson, 2013). In some instances a limitation of the heterogeneous sample is that findings may be relatively removed from the real life setting i.e. captured experience of working long shifts in mental health units may not be as readily linked to the specific characteristics if participants have a very varied work (Robinson 2013). However qualitative methods like framework analysis (Ritchie et al., 2013) allow for the comparison of experience based on participant characteristics, thus using heterogeneous data to explore specific characteristics.

Generalizability was a priority in the design of this study. Long shifts are widely used in mental health services in the UK (Griffiths et al, 2014) and so findings that improve understanding of nursing staff experience across a range of settings would be useful. There was also a call for improved understanding of how varied work characteristics impact the experience of working long shifts (Ball et al, 2014). It was therefore decided to select from a heterogeneous universal sample, to capture variety in experience and so better represent the reality of varied long shifts across the UK. Variety was sought in the following characteristics:

- Participant demographics: including age, gender, ethnicity. Previous research indicated that such factors influence the experience of working long shifts, for example Chen (2011) found a relationship between age and fatigue in their study into long shifts.

- Participant home caring responsibilities: including who the participant lives with and additional caring responsibilities (i.e. for older relatives). Previous

research indicated that family responsibilities may exacerbate the effects of long shifts (Chen, 2014)

- Geographic location of workplace. This was to ensure a range of hospitals and NHS commissioning groups that oversee the inpatient units on which participants worked, for a variety in unit culture.
- Job role. To include registered nurses, support workers and student nurses in a range of roles.
- Client groups. To include older adult, working age adult and CAMHS.
- Current and past experience. To include people who have chosen to stop working long shifts as well as those who continue to work them. This was to attain a variety of experiences and avoid biasing the sample by only interviewing people who remained working long shifts. For meaningful data to be provided past experience would need to be recent enough that participants could readily remember and connect with their time working long shifts.

## Sampling

Sampling strategy is integral to research design as who is selected effects the usefulness of the data and extent to which wider inferences can be made (Ritchie et al., 2013). Two strategies were considered for this study: convenience; and purposive sampling.

### Purposive sampling.

Purposive sampling uses predetermined variables to purposefully select participants. For example a study may survey a population, and from the survey select participants who met particular variables (Brown, 2007). Selection may be in pursuit of people with very similar characteristics (homogenous) in order to delve into very specific phenomena; or people with different characteristics (heterogeneous) to gain an understanding of phenomena from many angles (Ritchie et al., 2013).

### Convenience sampling.

Convenience sampling is when participants are selected based on who is available. This would mean interviewing all volunteers who meet inclusion criteria. This approach allows for the collection of data relatively quickly and cheaply (Ritchie et al., 2013). Samples acquired in this way can lack diversity; the sample is

left to chance and is biased by the location in which it is collected (Ritchie et al., 2013).

A pragmatic approach was taken, which for the sake of this study shall be termed ‘enhanced convenience’ sampling. It was decided to advertise the research widely to nursing staff who work long shifts in mental health care and to interview all those who volunteered who met inclusion criteria. Participant demographics would be monitored as interviews occurred. If participants were not coming forward who represented variance in specific criteria then adverts specifying these criteria would be created in order to ensure diversity and so that the sample would be less impacted by chance.

## Recruitment

Alongside deciding sampling, thought was given to the way in which participants would be reached. Careful planning of the recruitment strategy was important as it is not uncommon for research to overestimate the availability of willing and eligible participants (Gul & Ali, 2010) and underestimate the time and resources needed for recruitment (Northouse et al., 2006); such miscalculations threaten the feasibility of research (Archibald & Munce, 2015). A traditional approach and using social media were considered as mediums for recruiting participants.

### Traditional approach.

The first recruitment procedure considered was to approach NHS Mental Health Trusts for permission to advertise the research to their staff. This approach would mean that only staff from the approached Trust could be recruited. Due to limited resources of this study the quantity of Trusts approached would be capped, so the pool of potential respondents would be limited to a small number of Trusts.

### Social media.

Recruiting participants via social media, unlike more traditional approaches, would not restrict access to specific Trusts: for this reason it was selected for this research. Use of social media for recruitment in health research is becoming increasingly common (O’Connor, Jackson, Goldsmith, & Skirton, 2014). A primary benefit of using social media for recruitment is the geographical breadth of people reached, combined with telephone interviewing this removed barriers to recruiting from anywhere across the UK. Social media has also been found to be more

effective at recruiting hard to reach groups (Ince, Cuijpers, van't Hof, & Riper, 2014; Kayrouz, Dear, Karin, & Titov, 2016), although this is not a particular issue for research with nursing staff.

Generally, social media is widely used; 90% of UK households have internet access and 66% of UK internet users are on social media (Office for National Statistics, 2017), with approximately 13 million Twitter users in the UK (Aslam, 2018). However, demographics of social media users are skewed; for example, Twitter users are more likely to be young (with around 60% of 18-49 year old internet users on Twitter, and around 30% 50-64 year olds) and higher earners (Aslam, 2018).

**Sample size.**

When using a qualitative approach the sample size needs to be large enough to uncover varied perceptions in order to create a rounded account of phenomena (Morse, Barrett, Mayan, Olson, & Spiers, 2002). Qualitative research is unconcerned by the prevalence of statements, rather the focus is on acquiring a breadth of unique statements, therefore the sample size does not need to be as large as quantitative studies that seek statistical power (Ritchie et al., 2013). Therefore with qualitative sampling there is a point of diminishing returns, when more interviews do not add new evidence; this is known as theoretical saturation (Glaser, 1978). As data analysis is intensive in terms of time and resources it is important to be alert to when saturation occurs (Ritchie et al., 2013). So the sample needed to be large enough to provide new understanding, and small enough to manage with available resources (Sandelowski, 1995).

Theoretical saturation can be difficult to identify (Mason, 2010) and there is a tendency for researchers to interview more participants than needed (Guest, Bunce, & Johnson, 2006). It is therefore helpful to have an explicit saturation strategy. For this study theoretical saturation was understood to be the point at which the researcher noticed that they were not hearing new information, accompanied by a familiar, almost "bored" (p138), feeling of having heard it before (Holzemer, 2009). To ensure that the first repetitive interview was not an anomaly, "stopping criterion" (Francis et al., 2010) would then be used. Stopping criterion is the practice of conducting a further pre specified amount of interviews following apparent saturation: if these interviews produce new ideas then interviewing would continue,

and if they do not then data collection stops. For this study a stopping criterion of two was chosen.

## Data Analysis

The way in which the collected data would be analysed needed to be decided. There are three broad groups of qualitative data analysis; the purpose of the first group is to explore the use and meaning of language, the second to describe and interpret participant's views and third to develop theory (Tesch, 2013). Aims of this research aligned with describing and interpreting participant's views. Methods of data analysis that describe and interpret include phenomenology, thematic analysis and a form of thematic analysis called framework analysis. These approaches shall be outlined.

### Interpretive Phenomenological Analysis.

Interpretive Phenomenological Analysis (IPA) attempts to understand how an individual makes sense of their experience (phenomenological) with emphasis on the negotiation between the researcher's and participant's worlds (interpretive) (Smith, Flowers, & Larkin, 2009). The focus of this analysis is on individual meaning and process rather than events and their causes and the philosophical underpinnings of this approach do point to broadening the lens from this individual meaning to a more general understanding (Harper & Thompson, 2011). Samples selected for IPA tend to be homogenous, drawn from people with lived experience and a strong opinion of the phenomena explored (Harper & Thompson, 2011).

### Thematic Analysis.

Thematic analysis is a method for identifying and analysing patterns of meaning, or themes, across a data set containing multiple participants (Braun & Clark, 2006). Thematic analysis is not aligned to particular epistemological or ontological understandings and so the method can be fitted pragmatically to the needs of the research question (Creswell & Creswell, 2017). As a foundational analysis thematic analysis is viewed as suitable for researchers new to the qualitative approach (Braun & Clarke, 2014) and thoughtfully used it is appropriate for research into health services (Crawford, Brown & Majomi, 2008; Gildberg, Elverdam, & Hounsgaard, 2010).

**Framework Analysis.**

Framework analysis, based on thematic analysis (Smith, Bekker, & Cheater, 2011), was developed for applied policy research (Ritchie et al., 2013) and is gaining popularity with researchers in health services (Smith et al., 2011). Framework builds on thematic analysis with clearly defined steps that take into account a-priori and emergent themes as well as enhancing transparency of the method. Framework analysis was designed to be accomplished in a limited timeframe and with appropriate supervision is a suitable approach for non-expert qualitative researchers (Gale, Heath, Cameron, Rashid & Redwood, 2013) and is accessible to non-academic audiences (Srivastava & Thomson, 2009). For this study explicit acknowledgment of a-priori themes arising from the general health literature was deemed to be advantageous, as was the transparency of defined steps. For these reasons framework analysis was selected as the method through which to analyse data.

**"How we direct our gaze"**

Like thematic analysis, framework analysis is not innately linked to theoretical underpinnings (Gale, Heath, Cameron, Rashid & Redwood, 2013), as such the question of whether data is interpreted inductively or deductively and whether at a semantic or latent level is left to the overall paradigm of the research. It is important to consider these questions as they influence the way in which data is interpreted within the given analytical frame: "as soon as we have a transcript in front of us: there are infinite things we could infer, about action, meaning, purpose etc. How are we to direct our gaze? What do we code for?" (Smith, Flowers, Larkin, 2009 p46). As discussed above a pragmatic paradigm bases such decisions not on epistemology or ontology but what would work best for the research question (Sandelowski, 2000).

**Inductive and deductive.**

An inductive approach allows themes to emerge from data without being guided by initial aims or theory. In contrast a deductive approach is driven by pre-existing knowledge of the topic area. It was decided that the theory and research into the effects of long shifts in general nursing would helpfully guide this research and so a deductive approach was suitable. An inductive approach was also necessary as new information pertinent to mental health nursing may be heard. This approach

would make full use of the defined steps created by framework analysis, which allows for the inclusion of a-priori and emergent themes and so both deductive and inductive analysis was chosen (Ritchie et al., 2013) .

***Using computer assisted qualitative data analysis software (CAQDAS).***

When using framework analysis CAQDAS may assist in the transparent inductive and deductive exploration of data (Ritchie et al., 2013). This is as CAQDAS facilitates display and organisation of data accessibly and systematically (Seale, 2000) increasing analytic rigour (Flick, 2014). Criticism of CAQDAS lies in the fear that the ease of such programmes may lead to the researcher taking short cuts (Weitzman, 2000) or assuming that the programme can analyse the data for them. It was decided that for this research NVivo, a type of CAQDAS would be used to aid data management, much as word processing software would aid write up (Flick, 2014) with decision making and analysis remaining with the researcher.

**Semantic and latent.**

Data can be interpreted at a semantic or a latent level. Semantic interpretation takes what the participant says at face value. Latent interpretation looks beyond the surface; identifying meaning behind the participant's words. The breadth of data gathered and practical nature of long shifts meant that semantic interpretation was appropriate for this study. Furthermore this approach encouraged interpretation to remain close to participant's intended communication. It was decided to take a predominantly semantic approach, however were a meaningful interpretation to emerge that was on a latent level it was felt that to ignore this would be to the detriment of analysis. Therefore a predominantly semantic approach was taken, with space for latent interpretation if it was consequential for understanding nursing staff experience.

***Using Summaries.***

As part of transparent data management, framework analysis uses charts into which information from interviews is sorted. In order to make this a manageable process Ritchie et al. (2013) encourage summarising transcripts. Approximations of participant account are created, and in order to get to this point the researcher interacts extraordinarily closely with the data. This is through reading the original account, processing its meaning and distilling its essence. This is a time consuming process with the advantage that it "engages the analyst's brain in a way that simply moving chunks of data does not" (Ritchie et al., 2013 p305). Using summaries fits

well with semantic interpretation of data as summaries more readily capture the interview content rather than how it was said. It was decided to use summaries to assist in creating a manageable overview of data, with these summaries always easily linking back to participant's original accounts using NVivo.

It was also decided that three key requirements (Ritchie et al., 2013) would be followed while summarising. 1) Key phrases would be take from the participants' own words; 2) As far as possible interpretation would be kept to a minimum, the summaries would be an abridgment of what the participant said; and 3) Material would be not immediately dismissed if its relevance was not apparent, in case it turned out to be a "vital clue" (Ritchie at el, 2013; p. 309) at interpretation. In practice this would mean that almost the entirety of the raw data would be linked to a summary in the chart.

## Methodology Overview

After much consideration it was therefore decided that under a pragmatic paradigm qualitative data was to be collected via semi-structured in-depth interview from participants recruited through social media using convenience sampling until theoretical saturation was met. This would then be analysed inductively and deductively using framework analysis and interpreted primarily at a semantic level.

## Credibility and Quality Checks

Checks of credibility and quality in research assist the researcher and future readers in assessing methodological rigour. Elliott, Fischer, & Rennie (1999) developed guidelines for such checks in qualitative research. These guidelines are unambiguous but not ridged: Elliott, Fischer, & Rennie (2000) were clear that they were suggestions that the researcher may consider and follow as best fits the research paradigm. They were used in guiding this research. These guidelines are outlined below:

### 1) Owning one's perspective.

This is the researcher making explicit their own theoretical orientation and personal anticipations. Owning one's values, interests and assumptions allows the researcher and their subsequent readers to consider what influence these may have on interpretation.

The voice in which a report is written changes the emphasis put upon the subjective nature of research. From 'realist tales' where the author is absent from the text and interpretations are presented as facts not as subjective formulations; to 'confessional tales' where the author's presence permeates the write up, with attention moving between the studied phenomenon to the researcher's experience of studying it (van Maanen as cited in Ritchie et al., 2013). Gubrium (2018) advocates a tempered approach to self-referencing, in order that the subject matter is not eclipsed by the experience of the researcher. This compelling argument led to the use of third person in the write up. To ensure that one's perspective was owned however a reflexive statement is included below.

**2) Situating the sample.**

The researcher is advised to share relevant details of each participant to assist the reader in deciding the applicability of findings. This may be done with detailed pen portraits, or simply by sharing relevant demographics. Analysis that takes a few individuals and explores how they make meaning, like IPA, are suited to in depth pen portraits (Smith, Flowers, & Larkin, 2009). For this research that sought to create a more general understanding than individual meaning and used a larger sample, a more readily accessible table of pertinent participant characteristics was presented to situate the sample.

**3) Grounding in examples.**

Researchers are encouraged to share examples of data in order to illustrate how categories were created and conclusions drawn. Samples of data allow the reader to appraise the fit between data and researcher understanding. To achieve this extracts from data management were shared in the Method in order to illustrate the analytic procedure and the conclusions drawn from it. Use of quotations in Results may have multiple functions, they may be used as evidence, to explain categories, or illustrate them, to deepen understanding and enable the participants voice (Corden & Sainsbury, 2006). The focus of quotation use in the Results section in this study was primarily for illustration.

**4) Providing credibility checks.**

Researchers are advised to check the themes they create. Two methods of credibility checking used were: 1) to triangulate findings with pre-existing studies; 2) to review the data with other experienced researchers, in the case of this study the researcher's supervisors. This was not in pursuit of inter-rater reliability, a technique

used in quantitative research as reliability is based on the assumption that there is a fundamental 'correct' answer to be found in the data. This is not the focus of a qualitative approach, which understands that different meaningful accounts may be produced from the same data. The focus of reviewing themes and categories with experienced researchers was on creating a coherent narrative and in guiding the researcher to produce an account that is systematic and transparent and meaningful.

**5) Coherence.**

Coherent reports provide clarity in understanding of the researched phenomena while preserving nuance. When results are presented coherently they are held together in an overarching narrative rather than presented as a disparate melange of categories. To aid in this clear headings and diagrammatic illustration were used.

**6) Accomplishing general vs specific research tasks.**

This criterion refers to extending findings only as far as the data will allow and not overextending. This requires gathering a suitable range of data to meet the question; in this case a varied range of participants to capture a general understanding of working long shifts in mental health. In addition openly considering the limitations on extending findings helps a study to not overreach.

**7) Resonating with reader.**

The final criterion is that the report should resonate with the reader. This would mean that it is well written and is found by the reader to accurately represent and clarify their understanding of the researched phenomena.

## Reflexive Statement

As highlighted by Elliott et al. (1999) the researcher owning their perspective is useful for the reader in understanding the angle from which the researcher has understood the data.

### Owning ones perspective

My personal experience of shift work is primarily based on five years of working short shifts as a support worker on inpatient mental health units; for periods of time I worked alongside teammates (nurses and support workers) who worked long shifts. On occasion to assist with temporary staffing issues I worked long shifts, but I do not view this as substantive experience; I did not habitually arrange my life

to include long shifts and would see them as an interesting or necessary diversion to my usual routine. This proximity to long shifts, of being close to people who worked them but with only limited personal experience, means that my interest in the research question arose from observing the experience of my peers and discussions in teams. This second hand position meant that rather than approaching with a strong experiential opinion I was driven by observations of friends and colleges and questions brought up in team meetings.

My observations were varied. Some colleagues would speak with trepidation in the run up to a series of long shifts, and with pride that they had "survived" them when finished. In contrast others would work long shifts without particular remark, apart from to say that this was the way in which they liked to work. At times I was concerned by the impact that long shifts had on some patients, who felt very bonded to specific people (often their Key Worker) and would speak of feeling abandoned on their days off.

Having worked on a mental health inpatient unit that specifically did not allow long days and another that positively encouraged them, I was drawn to consider the motivations behind both cultures and the implications for staff and patients of the different practices. The former unit claimed it was noticeable when staff worked long shifts, that by the end of their shift their ability to empathise with patients and to make quick judgment calls was impaired, however they did not employ staff to work long shifts, so I did not see if this was the case. The other unit appreciated the fewer handovers that long shifts provided, stating that it resulted in fewer mistakes; again I could not see evidence for or against this statement. These different beliefs were strongly held by both units, influencing the shift patterns of employees and changing patient experience, yet there was a frustrating absence of research in mental health settings on which these beliefs were based. It was from these experiences that my curiosity in this research arose.

Having only ever worked for the NHS during austerity I have repeatedly seen practical decisions made that are necessary for keeping the teams running within a restricted budget. These include hot-desking, working to strict targets and using long shifts. When decisions are made to manage the budget, and not with client care as the driver, I am suspicious. This suspicion was a potential bias although intellectually I know that managing budgets does not inherently reduce quality of care.

I was driven to take my curiosity forward as part of my qualification to become a clinical psychologist. Part of what attracted me to clinical psychology was the opportunity to support the people who work with patients. Part of the role of a clinical psychologist is leadership; I saw researching long shifts as a way to contribute to the understanding of this commonly used practice and, in the long run, improve working conditions. Looking after staff is often justified by stating that this improves the experience for patients (Taylor, Graham, Potts & Candy, 2007). For me looking after staff is an end in itself. Apart from anything else the same person can be a patient and a nurse; over the last five years long term sick leave relating to personal mental health issues has increased 22% in NHS mental health staff (Greenwood, 2017). So I was driven by a desire to contribute to our understanding of the impact of long shifts, in the hope that findings may be used to further research and influence the design of shifts on inpatient mental health units for the improvement of working conditions.

# Method

Rationale for how the study was conducted has been described in the Methodology as well as guidelines for credibility. How this looked in practice shall now be detailed chronologically from initial recruitment to conducting the interview phone call and finally data analysis.

## Sampling

The sample universe was heterogeneous, including a wide range of mental health nursing staff with experience of working long shifts in mental health care. The inclusion criteria were:

- Registered nurses, student nurses or support workers.

- With a minimum of three months experience working long shifts, defined as 10 hours or over, on inpatient units.

- Current experience, or readily accessible past experience.

Exclusion criteria were:

- Nursing roles with highly limited patient contact, for example some managerial posts.

Convenience sampling was used and this was enhanced by monitoring the demographics of interviewees. A heterogeneous sample was sought; therefore if participants representing varied characteristics did not spontaneously volunteer then targeted adverts were used; this occurred once (see recruitment). Monitored variables included: job role (nurse, support worker or student nurse), age, gender, ethnicity, the patient group they worked with, care responsibilities at home, geographical location and whether experience was current or past.

## Recruitment

In July 2017 tweets on Twitter and posts on Facebook were published advertising the opportunity to take part in this research. These adverts included a poster (Figure 2) detailing inclusion characteristics as well as a link to the information sheet (Appendix A).


Figure 2: *Poster used to advertise research on Twitter*

Volunteers were invited to directly message the researcher via Twitter, Facebook or email. When volunteers made contact it was verified that they met inclusion and exclusion criteria. If volunteer experience of long shifts was not current a conversation was had between the researcher and volunteer to ensure that their recollections of working long shifts were detailed, vivid and 'live' to the volunteer. All participants with past experience had worked long shifts in the preceding 2 years. Following verification a further copy of the information sheet was emailed or directly messaged to the volunteer. Once it was confirmed that the information sheet had been read a date for the telephone interview was agreed.

By the end of August interviews had been conducted with 13 participants. From monitoring demographics it was noted there were no Black Asian and Minority Ethnic (BAME) volunteers. An absence of BAME volunteers was a discernible imbalance in recruitment, as in the NHS 20% of nurses and 15% of support workers identify as BAME (NHS Digital, 2016). Therefore, as part of the 'enhance convenience' sampling strategy, adverts were tailored to invite BAME volunteers (Figure 3). In addition The Mental Health Nurses Association of Unite ran a brief article in their newsletter that invited BAME nursing staff to volunteer (Appendix D).


Figure 3: *tweet used to recruit BAME nurses*

Saturation was evident during Interview 15. A further two interviews were conducted as 'stopping criterion'; these confirmed saturation. Data collection was ended November 2017.

## The Interview Telephone Call

Participants were called from a private location on campus or the researcher's home. Participants were advised to take the phone call somewhere private with few distractions. The recorded phone call began with verbal consent (Appendix B, for more detail please see 'Ethics').

### Participant variables.

Participant variables, including demographics and work characteristics, were collected following consent. Starting interviews with these variables allowed for the monitoring of heterogeneity within the sample. Variables were collected using a form (Appendix C) and input into a spread-sheet which was updated and monitored throughout recruitment. Opening the interview with questions about participant demographics and work characteristics also provided valuable context for upcoming questions, as well as rapidly habituating the interviewee to openly responding to the researcher (Ritchie & Lewis, 2007). Variables deemed of influence were taken from the reviewed literature and discussion with supervisors. Monitored demographics were: age, gender, ethnicity and caring responsibilities. Monitored work characteristics were: past or present experience, client group, geographic region of work.

**Topic guide.**

A topic guide (Table 2) steered the remaining interview. This guide was created in light of the narrative literature review. Topic areas that were identified in the literature were: experience within the shift, quality of care, work life balance and workplace systemic factors. Interviews started with a broad question such as "please tell me about your experience working long shifts". The interview would then build on the participants initial answer with the topic guide consulted as an aide memoire (Burgess, 1984). The order and specific wording of questions was not prescriptive, so as to create a natural rapport and thus enable the appearance of unanticipated themes (Ritchie et al., 2013).

Table 2: *Topic guide*

| **Topic** | **Probes & Prompts** |
|---|---|
| The Shift<br>*Experience of long shift* | - Beginning of shift: emotion, physical, cognitive<br>- Breaks (*duration, use*)<br>- Time management<br>- Crossover<br>- End of shift: emotion, physical, cognitive. |
| Quality of Care<br>*Interaction with patients* | - Continuity of care<br>- Meeting care needs<br>- Relationship with patient: therapeutic needs |
| Home/Work Balance<br>*Managing time around shift* | - Care commitments<br>- Travel<br>- Arrival home (i.e. *use of time, wind down)*<br>- Sleep<br>- Early start |
| Limits & Opportunities | - Work life<br>- Home life |
| Moderating Factors<br>*Workplace systemic factors* | - Supervision<br>- Relationship with colleagues |

| | |
|---|---|
| | - Management |
| Comparison | - Long vs short shift<br>- Current vs past experience |
| Final Opinion | - Ideal working pattern<br>- Advice to services<br>- Anything not covered |

**Recording Data**

Interviews were conducted over the phone and recorded using an in ear audio recorder. Recordings were then transcribed for analysis. Transcription was the first step in data reduction (McLellan, MacQueen, & Neidig, 2003) as oral communication was condensed to the written form (Flinders, 1997). Choices were made as to what level of data was retained in the transcript. As discussed in the Methodology analytical interpretation was at the semantic level, with the focus on what was said, not on how it was said. Semantic content was transcribed and non-semantic content omitted (i.e. “ahh”, “um”, pauses, overlaps).

Researchers are advised to transcribe interviews themselves in order to immerse themselves in that data (Reissman, 1993; Bird, 2005). For this reason five recordings were personally transcribed. Three of these recordings were transcribed concurrent with interviews so that self-reflection and supervisor feedback could be used to evaluate technique and improve future interviews (Ranney et al., 2015). This was of particular use as it was the first time the researcher had conducted interviews for qualitative analysis. An example of an adaptation made was to use the Topic Guide more fluidly than had been done on the initial interview. Due to the limited time frame the remaining 12 interviews were professionally transcribed by a local service approved by the University of Leeds. Transcription was paid for by The Max Hamilton Fund and The University of Leeds Doctorate of Clinical Psychology personal research budget.

## Data Analysis

Prior to starting data analysis a two-day "Framework Analysis of Qualitative Data" course was attended, hosted by the developer of framework analysis: NatCen. Analysis was guided by learning from this course, supervision and aramework analysis literature, most notably Ritchie, Spencer, Bryman and Burgess (1994), Ritchie, Lewis, Lewis, Nicholls and Ormston (2013) and Srivastava and Thomson (2009).

Ritchie et al. (2013) outline clear stages in conducting framework analysis. Progress through these stages shall be described in turn for clarity of narrative, however what occurred was an iterative process with creative movement across the stages as necessary to conduct a thoughtful and intuitive analysis. There are two principle stages in framework analysis: data management and interpretation. framework analysis emphasises systematic and transparent data management through five steps: 1) familiarisation; 2) constructing an initial thematic framework; 3) indexing and sorting; 4) data extracts; 5) charting. The managed data is then 6) described through constructing categories; and 7) explained by accounting for patterns.

## Ethical Approval

The Institute of Psychological Sciences Research Ethic Committee granted ethical approval for this research on 12th June 2017, ref 17-0172. Minor amendments to allow for targeted advertising were granted on the 11th September 2017. As participants were not recruited on NHS property or through NHS curated systems, NHS ethical approval was not required.

### Confidentiality and anonymity.

To maintain confidentiality participants were phoned from private locations, including the researcher's home and campus. The researcher's phone was set to 'no caller ID'. Participants were advised to take the call in a private location. They were informed that their participation would remain confidential. Confidentiality would only be broken if they revealed a person was at risk in such a way that disclosing information would reduce harm. Such risk was not disclosed during any of the interviews and confidentiality was therefore not broken. To maintain anonymity participants were give pseudonyms and person identifiable data was anonymised.

**Informed consent.**

Adverts published on social media for this research linked directly to the information sheet. When volunteers expressed interest a second copy of the information sheet was directly messaged to them. The information sheet was a vital component of the informed consent as it included details about the research, data protection and the participant's right to withdraw for a month post interview. Each phone call began with affirmation that the participant had read the information sheet and statements of consent (Appendix B) were verbally confirmed by the participant. Verbal rather than written consent was sought as this negated the need to gain the participant's address, thus strengthening data protection. Consent was recorded and verified by the researcher's supervisor, as third party verification was recommended by the The Economic and Social Research Council (2010). No participants chose to withdraw their data.

**Data security.**

Interview recordings were securely stored on the University of Leeds M: drive and deleted from the Dictaphone within 24 hours. The service that transcribed the audio files first signed a confidentiality agreement, and transfer of the audio files was via military grade encryption.

**Risk and distress.**

It was considered possible that reflecting on working long shifts could bring uncomfortable or distressing memories. Participants were advised that were this to happen they could speak to the researcher about this, or choose not to answer questions. At no point did a participant refuse to answer a question. At the end of each interview practicalities were discussed (i.e future contact details if they wanted a copy of publication) and there was a discussion about how the participant had found the experience. None of the participants expressed sadness or regret about what they shared, and some spoke of finding space to reflect helpful.

**Data Management**

**1. Familiarisation.**

The purpose of familiarisation was to get to get to know the data both on an holistic level and at the individual interview level (Parkinson, Eatough, Holmes, Stapley, & Midgley, 2016). Having conducted all of the interviews and transcribed five the researcher was already closer to the data than had it been secondary source,

or collected by a team (Parkinson et al., 2016). Additional familiarisation focussed on reading some of the interviews that had been commissioned for transcription as well as field notes. It was not necessary to review all of the data at this point (Srivastava & Thomson, 2009) as later 'indexing and sorting' involved close interaction with all of the data. While reading the transcripts the researcher made note of key ideas and topics that stood out.

**2. Constructing initial thematic framework.**

The topics identified during familiarisation were then refined into themes, which were used to develop an initial thematic framework through which the whole data set could be sifted. The aim of the framework was to conceptualise all data into manageable chunks, without obvious overlap or omission (Ritchie et al., 2013). At first chosen themes significantly overlapped. Parkinson et al. (2016) described a similar problem in their worked example of framework analysis, and explained it was because their themes were too interpretive for this stage. Ritchie et al., (2013) counselled against interpretive themes when constructing the thematic framework as it can lead to premature analysis and the loss of important detail. The themes were re-examined and readjusted to make them more descriptive, for themes relating to trepidation and safety were removed. Following this, overlap was significantly reduced. These descriptive themes were closely related to the Topic Guide, which was to be expected at this stage of data management (Ritchie et al., 2013).

**3. Indexing and sorting.**

Interview transcripts were read through and indexed to the thematic framework. Computer assisted qualitative data analysis software (CAQDAS): NVivo, was used. This meant that data indexed under the same theme could be viewed together, or with one click viewed within its original context.

**4. Reviewing data extracts.**

Reviewing was concurrent with indexing and sorting; it was a continual assessment of whether the initial thematic framework was as helpful as it could be as new transcripts were indexed, or whether to further refine them. Refinement was through merging, separating or renaming themes, the aim being to make the data as easy to navigate as possible at the interpretation stage. For example "impact of energy and demands" was divided into "energy across shift" , "emotional demands" and "impact"; and then "impact" was subsumed by the other two themes. The final descriptive themes were:

Overarching opinion on long shifts ❖ Individual characteristics ❖ Shift pattern ❖ Patient characteristics ❖ Breaks ❖ Staffing ❖ Overtime ❖ Crossover ❖ Management and supervision ❖ Relationship with colleges ❖ Interaction with patients and carers ❖ (Management of) daily tasks ❖ Energy across the shift ❖ Emotional demands ❖ Run of long shifts ❖ Time between shifts ❖ Days off ❖ Other.

**5. Data Summary and display using a chart.**

Charting was the process by which the indexed data was moved from its original composition within the interview transcript into a chart. The chart was a grid with thematic framework themes on the horizontal axis and participant pseudonyms on the vertical axis. Summaries of data collected under each theme for each person were written into this grid. For an example of the framework chart please see Appendix E. NVivo allowed for these written summaries to be directly linked to the raw data, so that the original source could be returned to when needed.

**Description and interpretation**

The charted data was then mapped, described and interpreted. The comprehensive data management that preceded this stage provided a solid foundation for interpretation, both through the creation of the summary chart and the process of deliberately and thoughtfully sifting the data; during which observations were made and patterns noted. Now the task was to describe the data, to capture what it said about nurse, support worker and student nurse experience of long shifts, their views on how it impacted their wellbeing and patient care and factors that influenced this. The aim was to create a coherent account (Elliott et al., 1999), that took the multiplicity of evidence and created a useful overarching narrative that was grounded in the data (Elliott et al., 1999). To do this categories were developed.

**Developing categories.**

The first step in developing categories was to detected elements from the summarised themes. An example of this is given in Table 3. Once elements were identified they were sorted according to underlying dimensions

Table 3: *Example of developing detected elements from theme summaries*

| **"Emotional Demands" Summaries** | **Detected elements** |
|---|---|

| | | |
|---|---|---|
| Grace | Generally start the shift thinking "okay, lets do this" and then in handover hears what had happened & sees they're short staffed- and she feels "dread" about the shift. If she is shift coordinator she tries to balance welfare of staff, all on LS, against welfare of her patients "juggling everything in front of you".<br>Towards end of working on unit would get home after day of adrenalin and cry because she didn't feel that she was doing any good (felt like security person, not therapeutic) | - motivation at start of shift<br>- dread from handover (& staffing)<br>- coordinator: balancing/juggling staff & patient welfare<br>- comedown from adrenalin<br>- sadness from type of work<br>- didn't believe in the work. |
| Sam | Last job you could cut the atmosphere there with a knife. The environment was high anxiety, really stressful, lots of incidents, by hour 10 Sam would want to "down tools and go home".<br>Only nurse on shift means that you feel more rushed with things.<br>If on shift the next day will be thinking about what you have to do when you get home- eat, sleep. If next day is day off then Sam felt relieved.<br>Left job due to going on sick from burn out: Started drinking quite a lot, didn't want to walk into building. Not giving 100% at work: avoiding, couldn't be bothered, wasn't interested in dealing with patients. He wasn't able to be caring and compassionate as he wanted to be.<br>Current job<br>Notes having more mental resilience at the start of the shift, in the morning. has | Previous Job:<br>- intense atmosphere<br>- high incidents<br>- stress: wanting to go home at 10h<br>- Lone nurse: rushed<br>- planning ahead: home tasks when on shift<br>- burnout: drinking @ home to manage.<br>- burnout: Aversion to place of work.<br>- burnout: Avoiding work<br>-burnout: compassion fatigue<br>Current Job:<br>- start of shift: more resilience<br>- fewer incidents: reduced |

| | | |
|---|---|---|
| | fewer incidents than last job so anxiety levels aren't as high. | anxiety |

The identified elements were then sorted and grouped into categories which would meaningfully describe how long shifts were viewed and experienced. Mind maps were initially used at this stage to assist the researcher in visualising connections between elements (Appendix F). Categories were refined as the researcher became more immersed in the data throughout this iterative process. Through this six separate categories were identified, which are detailed in Results.

A single dimensional typology was also identified, this was shift length preference. Typologies in framework analysis are a form of category that contains a continuum. In this case whether participants 1) preferred long shifts, 2) were neutral, or 3) preferred short shifts. Unlike demographic variables (like age, gender, ethnicity) and some work characteristics (job role, patient group) shift length preference was not a variable used to screen for heterogeneity of the sample. Initially therefore it was not a monitored variable. A closing question in the topic guide asked what the participants "ideal" working pattern was. It was found however that participants almost always shared their preference for long or short shifts (or neither) much earlier on, in their response to the broad opening question. It was apparent that to participants it was important to share their preference. The weight that participants placed on their shift length preference was a principal motivator for selecting this as the typology, as it appeared to be a particularly valued variable to participants. This typology was used to further explore and offer explanation of patterns in the data. The outcome of this process is detailed in the results.

## Results

This chapter describes the findings from interviews conducted with 17 members of nursing staff about their experience of working long shifts. A table outlining participant characteristics is presented (Table 4) to anchor the findings, clarify basic details in relation to quotations, and situate the sample (Elliott, Fischer, & Rennie, 1999).

Nursing staff held a range of roles; with Agenda For Change bandings of three to seven. Among the 17 participants, seven had experience working long shifts as a support worker; three of these went on to nurse training, with two in training at time of interview. Eleven of the participants had experience of working long shifts as registered nurses. Ten of these were registered mental health nurses and one a registered general nurse (working on a mental health unit). Throughout the results the term "nursing staff" refers to both registered (RN, RMNs) and unregistered (support workers, student nurse) posts. When the nursing staff role was of increased significance, specific job roles are clarified.

Relevant experience from a variety of units was reported including; child and adolescent; adult (acute, psychiatric intensive care, medium secure, forensic, personality disorder) and older adult (functional, dementia, rehabilitation) and finally older adult acute medical (a unit in a general hospital for the treatment of physical health needs but for older adults with additional mental health needs; primarily dementia also depression and delirium). Ten participants were in a post that involved long shifts at time of interview, with the remaining seven referring to past experience, having finished working long shifts within the last two years. Of the 17 nursing staff 16 reported being White British and one Mixed White/Asian. Fourteen identified as female and three male.

The findings were obtained using framework analysis as detailed in the Method. Categories and their subcategories are illustrated in Figure 4, the five categories being:

- Being present and being absent
- Using up personal resources
- Getting rest and why it can be difficult

- Being part of a team
- Getting the most out of time off

Quotations are used when describing each category. This is to enliven central messages participants shared as well as to ground the findings (Elliott et al., 1999), so that the reader may consider the fit between the data and the researcher's understanding. Quotations used are not exhaustive but selected as representative among other quotes.

Language that refers to the quantity of participants who shared certain views was avoided; this included explicit numerical terms (i.e "two participants") and quasi-numeric terms (i.e "a few", "most"). White, Woodfield, Ritchie, & Ormston (2014) counselled against numeric language as "at best misleading and at worst erroneous" (p379) as it implies that the quantity of participants who express a particular view is meaningful, that it points to prevalence in the overall population and this is not the case. Qualitative sampling does not aim to measure prevalence, rather it intends to map range and diversity. A small convenience sample cannot evidence prevalence; however, as interviews were conducted until saturation, range and diversity were captured and so patterns in nursing staff report can be explored. An example of a pattern of interest would be if all nursing staff working with a particular shift characteristic report a similar experience, which differed from other nursing staff: this pattern would be explored to assist in explaining the data.

A single dimension typology emerged and was found to be helpful in understating findings. This typology was: shift length preference, with three discrete positions along a continuum. These were 1. Preference for long shifts. 2. No preference. 3. Preference for short shifts. The groups are illustrated by colour on the demographics table (Table 4).

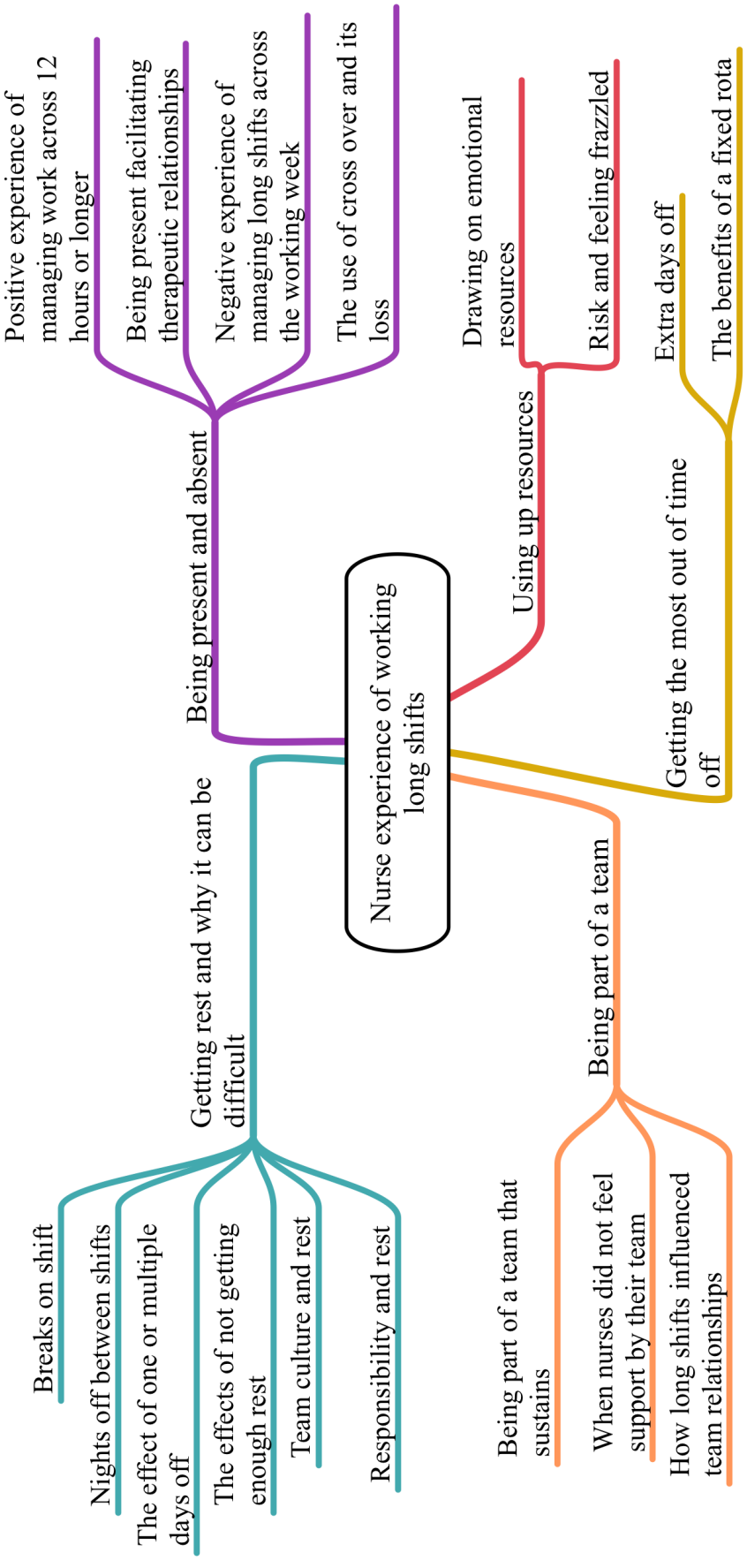


Figure 4: *Nursing staff experience of working long shifts: a mind map.*

Table 4: *Participant Details and Shift Preference.*

| Pseudonym | Age | Role (band) | Setting | Location | Experience |
|---|---|---|---|---|---|
| Amelie | 25-34 | RN | Adolescent | South | Present |
| Bethany | 25-34 | Support Worker | Forensic Adult | Yorkshire | Past |
| | | RMN (5) | Acute Adult | | |
| Cleo | 25-34 | RMN (6, 7) | Male Forensic<br>Male Acute | Yorkshire | Past |
| Grace | 25-34 | RMN (6) | PICU | South Central | Past |
| Jane | 25-34 | Support Worker | Personality Disorder | Yorkshire | Past |
| Samuel | 35-44 | RMN (5) | Acute Male | Yorkshire | Present |
| Ella | 35-44 | RMN (6) | Medium Secure Female<br>Male Acute | Wales | Present |
| Abby | 18-24 | Support Worker | CAMHS PICU | South East | Present |
| Tom | 35-44 | RMN | Acute | Wales | Past |
| Eve | 45-54 | RMN | OA Acute Medical | Scotland | Present |
| Simon | 35-44 | RMN (6) | OA Dementia; | North East | Present |
| | | RMN (5) | OA Functional | | |
| Jessica | 25-34 | Support Worker | Acute | Yorkshire | Past |
| Phoebe | 18-24 | Support Worker | CAMHS PICU | England (region not recorded) | Present |
| | | Student RMN | OA | | |
| Becky | 25-34 | RMN (5) | Acute | North West | Present |
| Alice | 25-34 | Support Worker | Female Acute | Yorkshire | Present |
| Sarah | 35-44 | RMN (6) | Acute | Yorkshire | Present |
| Katie | 25-34 | Support Worker | Personality Disorder | England (region not recorded) | Past |
| | | Student RMN | OA Rehabilitation | | |

| Preference for short shifts | Preference for long shifts | No preference |
|---|---|---|

**Category 1: Being Present and Being Absent**

During a long shift the nurse, student nurse or support worker is present from morning until night, there was a spread of opinions on whether being present for this long was advantageous or not. Advantages included that it was easier to get tasks done across the day compared to shorter shifts which were felt to be more disruptive. Furthermore it was thought that being present from morning until night communicated solidarity with patients. Disadvantages included difficulty staying attuned for so many hours and no longer having cross over of shifts which was found to remove therapeutic and training opportunities. Furthermore using long shifts condensed the working week into fewer days, creating more days off; these longer periods of absence were reported to disrupt therapeutic relationships. These advantages and disadvantages shall now be considered in turn.

**Positive experience of managing work across shifts 12 hours or longer : *"You can get all your jobs done".***

One perspective of being present across a long shift was that it helped nursing staff get the most out of their shift. This included managing workload. The advantages for time management across a long shift included making use of the different paces across the shift, for example finding quieter times in which to do paperwork.

> *I think working over a long day, over that period, you've got different times in the day where you can, sort of, squeeze [paperwork] in.* (Samuel, RMN, LS preference)

Nursing staff also spoke positively about being able to plan time without it being broken up by a change of shift in the middle of the day (as would be the case when working short shifts). In addition they reported that longer hours meant there was time for all elements of their role within one shift; including therapeutic time with patients, paperwork and communication with wider services.

> *On a long day, it gives me a chance to get everything done… you feel when you walk away from it that actually it's been a good day because you have spent time with family and patients and made that phone call. It feels like it all comes together* (Sarah, RMN, No preference)

**Being present facilitating therapeutic relationships: *"In it for the long haul".*** Being present for eleven or more hours at a time was reported to be good for therapeutic relationships partly due to the practical opportunities it created.

> *If [clients] want to do something you could be a bit more responsive to their needs because you had the whole day* (Jessica, SW, No preference)

Being present all day enabled nursing staff to get to know patients rapidly, which was described as particularly helpful on units where admissions were short. Additionally nursing staff reported that being with patients the "full scope of the day" helped them recognise patterns and fluctuations in presentation and support their patients, without the potential that this information was lost in handover.

> *If you are there for twelve hours, you can really see that pattern developing, but if you are not there for that long then you might miss it or it might not get handed over properly.* (Abby, SW, LS preference)

When working with dementia patients, not changing staff part way through the day was reported to be helpful as patients may on some level get to know that member of staff.

> *You work out a rapport with them, get to know them a wee bit, right through the day. And then … they know you, they trust you, they recognise your face; they might not have a clue what your name is or what you're doing there but there's some sort of familiarity.* (Eve, RMN, LS preference)

Nursing staff reported that being present from morning until night also communicated solidarity with their patients.

> *Some of the clients tended to respond to you better if you were on a long day, I suppose there's something about you being in it for the long haul. You weren't just coming in and leaving.* (Jessica, SW, No preference)

**Negative experience of managing long shifts across the working week: *"It does take a little while to catch up".***

Another view was that being present for twelve or more hours made managing workload harder, with report that it was hard to hold the whole shift in mind and pace oneself. This was in part due to the variety of demands across the long shift which may include; running the shift, dispensing medication, taking phone calls, physical cares, giving direction and advice to colleagues, attending MDT or ward rounds, overseeing meal times and preparing paperwork (CPA, incident reports, admission, discharge). These tasks in and of themselves were each achievable, however as they built up across the shift nursing staff reported anxiety.

> *Just trying to juggle everything in front of you. It would go from a feeling of "Okay, I have work to do, let us do this. I am going to smash this, going to have a great day" to "How am I going to get through this?"* (Grace, RMN, SS preference)

When working long shifts the same member of nursing staff was present from morning until night, this was reported to have advantages. However due to additional days off nursing staff were then absent for longer periods of time compared to those working short shifts; this was reported to be disadvantageous. An example of these two divisions of time is shown on Table 5, which illustrates a hypothetical week of short shifts compared to long shifts and shows two days off for short shifts and four off for long shifts.

Table 5: *Division of time at work: A comparison of long and short shifts.*

| | Wednesday | | | Thursday | | | Friday | | | Saturday | | | Sunday | | | Monday | | | Tuesday | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E | L | N | E | L | N | E | L | N | E | L | N | E | L | N | E | L | N | E | L | N |
| Short Shift | | | | | | | | | | | | | | | | | | | | | |
| Long Shift | | | | | | | | | | | | | | | | | | | | | |

E: "Early" 07:00- 15:00; L: "Late" 13:00- 21:00 N: "Night" 20:30- 07:30.

*Green boxes indicate time at work.*

The series of days off characteristic of long shifts was reported to disrupt the therapeutic relationship. Nursing staff reported that on fast paced units it was common to be on days off for significant events, including the planning and discharge of a patient. Nursing staff spoke of feeling disconnected or sad at times when they missed such events. The general change on the unit following days off may also lead to confusion.

> *You do not know what is going on, you feel a bit lost with your relationship with a patient, I suppose, when you have come back and things have changed a lot…* (Bethany, SW then RMN, SS preference)

Due to the longer periods of absence, handover when working long shifts was reported to be of particular importance. Routinely brief handovers (as short as 15 minutes), covering only risk and events of the day before, were reported to leave nurses ill-informed. This caused professional embarrassment, a sense of letting patients down and experience of disconnection.

> *[Patients] are irritated at you, because you are not up-to-date with their information…. It made me feel incompetent. I never like the feeling of letting a patient down, they already feel let down so much of the time … I imagined it would make them feel "How can I trust that anybody does their job properly if you do not even know the information?"* (Cleo, RMN, SS preference)

Nursing staff reported using informal handovers, for example asking for additional details from colleagues outside handover time, to fully catch up. A handover book containing information beyond the last 24 hours was also spoken of positively, as was being able to access paper notes when computers were too slow or unavailable.

**The use of crossover and its loss on long shifts: *"When you do short shifts, you get a protected hour".***

When short shifts were used on a unit there was an hour or so when the early shift crossed over with the late shift and there were twice as many staff as the rest of the day. This 'crossover' period or "slack hour" was reported to be useful for keeping

on top of paperwork, spending time with clients, taking breaks, arranging meetings and training.

> *If you think that you've always got a staff member on either checks, or on meal support, or meds, when there was a crossover you could really get a hour spare to spend time with a client properly*. (Jessica, SW, No preference)

When only long shifts were used there are no such crossover periods. Nursing staff were present but restricted in what they are able to do as there were no additional staff creating flexibility. Nursing staff noted being anxious without this more flexible time and having difficulty accessing training and supervision.

> *You do not have your protected hour. That makes you a bit more anxious about getting everything done on the shift.* (Alice, SW, No preference)

No longer having crossover was also reported to impact on patient care.

> *There are less staff between certain time frames, and I think that has impacted on patient care... Between twelve and three there would always be ten staff around so, during that time you could arrange leave or appointments, your one-to-ones and groups… if you have got five people on long days then, all day, you have just five people, so you are missing out.* (Bethany, SW then RMN, SS preference)

Alternatively others doubted that crossover time was used resourcefully.

> *My general opinion of that double-staffing hour…it generally ends up being wasted time, because if you are not careful, nothing of any significance really happens.* (Tom, RMN, LS preference)

In some cases nursing staff worked long shifts alongside teammates who worked short shifts and thus were able to take advantage of the crossover.

*There was a bit of time freed up by being a mixture of long shifts and shorter shifts, there was a crossover between the shifts.* (Tom, RMN, LS preference)

**Category 2: Using Up Personal Resources**

This category captures nursing staff experience of working with complex emotional presentations for twelve or more hours; it is the impact of the depth and duration of emotional labour. Nursing staff reported shifts where they used up their energy and emotional resources, leading to feeling worn out in the final few hours. This led to being more passive with patients and potential risk relating to being less alert. Adrenalin was reported to alleviate the effect of weariness at times of crisis.

**Drawing on emotional resources: *"Feeling emotionally drained".***

Nursing staff described daily interactions with patients that drew on emotional resources. These included supporting patients through flashbacks; with low mood; working with patients who were disoriented to time and place or disconnected from reality as well as tolerating heightened behaviour. Language about emotional resources described a cost to using them, either that resources were used up or that nursing staff carried emotional burdens from interactions.

*The majority of clients have dementia, so there's a lot of repetition in what you're saying and what you're listening to. Being asked the same question over and over again can be really quite draining.* (Eve, RMN, LS preference)

*It can feel quite relentless, because, obviously, that's how they're feeling, so that's then how you end up, you take that on for them and it can feel quite intense.* (Sarah, RMN, No preference)

Patient incidents were described as common on some units. These incidents were violent in nature, with the violence either turned in on the patient as acts of deliberate self-harm or outward as aggressive behaviour towards others. Nursing staff on these units described feeling alert and on edge.

> *I would be kind of adrenaline filled and pumped the morning before even starting work* (Ella, RMN, LS preference)

Working long shifts where incidents were common was described to be especially exhausting. This was linked to the length of time that nursing staff were in this heightened state, with it described that they needed to remain alert across the entirety of the shift.

> *You… would feel like you had ran a marathon, because you were just so exhausted at constantly being on guard, constantly tense.* (Grace, RMN, SS preference)

Nursing staff who had experience of working long shifts on units where incidents were common and ones where they were less common, commented on the different impact that working long hours had in these scenarios, with the latter easier to manage and less anxiety provoking.

> *The fourteen and a half hour shifts, working with the primary diagnosis of Personality Disorders, those were obviously quite difficult, whereas the fourteen and a half hour shifts that I have done more recently, on an Older Adult Rehab ward, do not feel anywhere near that difficult because the risk… is different and is much easier to manage…. You are not worried about being overwhelmed by something happening and you not being able to respond to it.* (Katie, SW then Student, No preference)

**The final few hours on shift & patient interaction: *"My brain feels frazzled".***
Nursing staff reported that working with intense emotional presentations left them drained and exhausted in the final few hours of a long shift.

> *By four o'clock, my brain feels frazzled and I do feel that does impact, again, on what you can do, which is why, when you get to six o'clock, I start to feel overwhelmed and overloaded. I just do not want to be there because I am tired and I feel groggy.* (Bethany, SW then RMN, SS preference)

This tiredness led to a feeling of being less present, with phrases like “floating along”, “half awake” and “zoned out” used. Being less present affected interactions between staff and clients. Nursing staff reported that towards the end of shift they were less likely to initiate activities or conversation, they had reduced interest in conversation.

> *When I did meds rounds in the morning, compared with the evening, I was a lot more lively, engaging them in conversation and asking them about their day and what they are planning to do. In the evening it would be just “Here are your meds”.* (Cleo, RMN, SS preference)

They also reported a shift of focus from prioritizing client need to getting the shift finished and going home.

> *Sometimes I will, maybe, pick and choose my answers and not give the clients the best care that I should, because I know that if I got into it really deep then that is me for the next hour or two... I definitely do make choices differently, towards the end of the day.* (Amelie, RN, SS preference)

Being tired at the end of the shift caused nursing staff to feel more irritable and short tempered with others.

> *When I am tired and you feel it seep into your bones which you tend to do with a long day, I do feel quite irritable and I worry about things.... That irritable-ness seeps out everywhere. I imagine that some of the patient do recognise it, recognise when we are stressed, when we are tired, when we might, I suppose as awful as it sounds, not want to be there at that time* (Bethany, SW then RMN, SS preference)

In comparison nursing staff spoke of being able to hand over to a fresh person if they felt frazzled working short shifts, and not having to persist at work while feeling compromised.

> *If I come on the late and someone's on the early saying "I can't cope with this", I'm like "I'll go and deal with this, while you like take time out". And it's nice when that happens, 'cause you don't like have to deal with it.* (Becky, RMN, No preference)

As tiredness and its impact on interactions with patients were predictable, nursing staff spoke of planning their long shifts around it. Planned time with patients was booked in earlier in the shift when they would feel more energised, this included one to one meetings and groups. Planning meetings for earlier in the day also left time for paperwork in the afternoon and evening. Therefore meeting with patients in the morning accommodated both internal (weariness) and external (tasks) demands.

> *Therapy-type discussions with the young people , it takes a lot out of me as a person as well, so I would do that towards the beginning of the day because, at the end of the day, I am more exhausted and find it harder to…take on board their problems and think of correct ways to give them answers as well.* (Amelie, RN, SS preference)

While planned interactions could be arranged in advance, a patient may seek staff attention at any point in the shift. The evening, around tea and handover were reported to be times when patients were more likely to seek support. Nursing staff described not having the energy to cope with this unplanned evening contact at times and so avoiding the patients.

> *I have definitely hidden away in the office before from somebody who is really difficult and I am on a long day and I just cannot face speaking to them anymore, so I have just taken myself off where I know they cannot reach, which I know is really avoidance, but you find you do that less on shorter shifts, because you can see an end.* (Cleo, RMN, SS preference)

It was described that this experience of feeling frazzled was exacerbated when there was a series of long shifts in a row. Examples of the impact of this increase of tiredness included running out of resilience when working with challenging

behaviour, being physically present in meeting but not concentrating and not initiating activities.

> *The kids, they have actually said that you can tell when someone is on their third day, because they are so, so tired… you are not as enthusiastic… On my first day "Right, guys, let us do a puzzle, let us do this, let us do that". By my third day I might not offer it, they might ask and I will do it but I probably will not offer it, which is important.* (Abby, SW, LS preference)

**Risk and feeling frazzled: *"You've got to pay attention".***

Nursing staff spoke of being less able to manage risk when tired, describing feeling less alert and more likely to be led by emotions. Examples of increased risk included feeling more likely to make medical errors at 6pm as well as being less alert when monitoring risky patients.

> *Towards the end of the day you might be getting a bit more tired and if you've just been so busy all day, obviously you've got to pay attention to the person, [when on one to one observations] you've got to be really, really, vigilant and sometimes if you're really tired you you're struggling to sort of focus.* (Phoebe, SW then Student, No preference)

On the other hand nursing staff reported that when incidents occurred adrenalin took over, mitigating the effects of tiredness and providing the energy and clarity needed to safely contain the situation.

> *If an incident happens, I would still respond to it exactly the same way as my first day because your adrenalin kicks in and your body goes into a natural response* (Abby, SW, LS preference)

**Category 3a: Getting Rest and why it can be Difficult**

Rest provided oases from the depth of emotional work and the duration of the long shift. Rest was described as vital for regaining energy. Rest was through taking breaks on shift, nights off between shifts and days off. Views were divided on whether opportunities for rest during long shifts were sufficient. Responsibility and

team culture influenced the likelihood of taking these opportunities. The impact of insufficient rest when working long shifts was also described.

**Breaks on shift: *"That moment away".***

A variety of benefits to having breaks on shift were described. Physiological benefits included physical rest and eating and drinking. Social benefits included catching up with colleagues in person, or friends over the phone and social media. A psychological benefit of stepping off the floor and away from demands was to gain a broader perspective on the shift, of seeing the bigger picture and gaining momentum.

> *… it gives you that moment away to just go and recharge your batteries and go back fresh. Because if you're having a stressful day…it gives you a minute to just sort of think " this isn't everything in my life, it's okay, I can have a minute, I can go back, I can do this".* (Phoebe, SW then Student, No preference)

The expectation of a break was a further psychological benefit, as the anticipation of it helped divide the shift into more manageable chunks.

> *It completely just breaks up the shift and that is really important. Your levels of tiredness and, also, your levels of motivation, if you are sat, thinking "Oh my God, I still have ten hours to go", it can be quite exhausting. If you have got a break there, you are like "Okay, well, I have four hours to go, and then four hours after" and it just breaks it up.* (Abby, SW, LS preference)

A contrasting view was that breaks were not valuable. Reasons for this included when breaks were not protected, for example being asked for advice during the break; finding the break too long and boring; or finding it hard to become motivated again having taken time out.

> *For me sometimes it is easier… to just keep on going because if I stop I will just want to stop and it is a lot more effort, and I find I go back in more of a bad mood sometimes.* (Amelie, RN, SS preference)

> *Sometimes it would make me more tired, sat in a room, not interacting with anyone, not doing anything. That would make me feel more sluggish.* (Cleo, RMN, SS preference)

The length of the break and whether nursing staff could leave the unit influenced the quality of breaks. Breaks of an hour to 90 minutes were long enough for staff to leave the hospital. Getting out of the hospital, to go for a walk or shopping was described as a satisfying use of time, leaving staff more refreshed. Conversely shorter breaks of 30 minutes were more likely to be subsumed by the general shift.

> *Short breaks quite often they are absorbed into the ether … whereas by having that hour and a half, it means you can be very organised with them and make sure people get their breaks that are long enough that, if they want, they can drive to a supermarket or they can get off site so that they can go and have some real recuperation time. They do not just go to a staff room on the ward for a cup of tea.* (Ella, RMN, LS preference)

**The effects of not taking a break on shift: *"You've got so many things in your head".***

There were various reports of the effect of not getting enough rest during shifts. Physically nursing staff reported feeling more tired, including being too tired to eat on getting home. Hunger from missing meals when missing breaks was also reported. Feeling physically tired and hungry was linked to poorer patient interaction.

> *After a long day when we have not had a break for all day … feeling hungry, feeling tired, that impacts then on how you might respond to things… maybe some people, including myself, might be able to respond and judge better, when there are not all those feelings of being stressed and overworked.* (Bethany, SW then RMN, SS preference)

Without sufficient rest across a long shift, nursing staff reported feeling immersed in the depth of emotional work and finding it hard to reflect, to come up for air.

> *…when [you're] are on a long day…you're in the middle of it, maybe you're not as reflective when you're in the middle of it.* (Sarah, RMN, No preference)

Without space for reflection nursing staff reported finding it hard to make decisions in the moment, a difficulty in putting work down, increased anxiety and not having time to process emotional events.

> *You've got so many things in your head... You're just almost reluctant to leave because you're thinking "What have I forgotten, I've forgotten something"... you just feel a little bit spaced out.* (Simon, RMN, LS preference)

> *You weren't getting the opportunity to go home and recuperate and deal with what had happened. Self-harm and stuff you want to be able to have a little moment to think about that.* (Katie, SW then Student, No preference)

**Nights off between shifts: *"Doing 20 hours with a sleep in the middle".***

Time between long shifts on several consecutive days is limited. In this time nursing staff reported needing to unwind, unload and sleep. Following a difficult shift a they may have to decide between going to bed on time or unloading, due to needing time to process the depth of emotional demand.

> *There was not enough time to get home, unwind, get a decent night's sleep and then go back again.* (Grace, RMN, SS preference)

A range of methods to make maximum use of the limited time were shared. This included taking intoxicants to encourage sleep, like alcohol or (illegal) herbal tea[1] (a

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[1] The tea was bought online as it contained an ingredient that was not legal in the UK. This offence was discussed in supervision by the researcher. It was decided that no action by the researcher needed to be taken as the nurse was unregistered at the time of purchase and had now left Mental Health Care for a

brand purchased online as the ingredients were illegal in the UK). These were drank to counter the effects of anxiety and adrenalin from the shift and encourage sleep.

> *There were incidents regularly so you would leave full of adrenaline…you did not finish until half past nine. So it would take me until something like eleven or twelve o'clock to actually relax and then I would have to be up at five… I cannot function on that, so you start drinking more. You get in from work and you have a large wine because that helps you relax quickly and helps you to get to sleep.* (Ella, RMN, LS preference)

Nursing staff also made creative use of their travel time. They may multitask in order to process emotional events or unwind. This was done alone or with others.

> *We could see horrific incidents, we cannot cry about it, you cannot get angry about it, we have to be professional for twelve hours. So in my journey home … I completely lose all of my emotions that I have been building up for twelve hours. I will have the music on really loud, I will be screaming to it, to get out any anger, then I will be crying, then I will be laughing and I just completely get out all of my emotions that I felt.* (Abby, SW, LS preference)

> *Two of us who would then, on the way home, have our hands-free on and talk about the day and that, to me, would be my reflection.* (Ella, RMN, LS preference)

Contrary to these reports of multitasking, using intoxicants and choosing between sleep and unloading, another view of the time between shifts was that it was sufficient for rest.

> *I'm normally quite exhausted after a long shift so it is quite easy to put my head down.* (Amelie, RN, SS preference)

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different profession. In the interview she stated she had no intention to return to nursing.

**The experience of one or multiple days off: *"Rested and ready to get stuck in"* or *"dreading it".***

A run of days off was reported to be reinvigorating after long shifts, enabling nursing staff to feel more present and able at work.

> *When you get back after your days off you're more rested and more ready to get stuck in.* (Eve, RMN, LS preference)

Some shift patterns result in a single day off. This was unanimously reported to be insufficient for mental and physical recovery after a run of long shifts, with an increase in stress reported on the shift following a single day off.

> *You do not feel mentally refreshed after having one day off.* (Alice, SW, No preference)

> *I had one day off … You'd finish late the day before and know you had to be back in the next morning, you'd just be dreading it.* (Jane, SW, SS preference)

**Category 3b. Barriers to Claiming Rest**

Nursing staff reported that at times they felt unable to claim rest that in other circumstances would have been available to them, for example by not taking breaks or going home late. Two principle barriers to taking allocated rest were noted: personal responsibility and team culture.

**Responsibility: *"My name is down for that shift".***

Registered nurses commented on feeling unable to take their break when they were nurse in charge due to feeling too responsible to absent themselves.

> *I definitely will not allow myself to have a break on those days, because I feel that even if I pass responsibility to somebody else, actually my name is down for that shift as Co-ordinator or Lead, it is easier for me to just not have a break.* (Amelie, RN, SS preference)

Short staffing and high use of bank staff also led to feelings of additional responsibility, which meant nurses and support workers were reluctant to leave the unit.

> *I think if you're a permanent member of staff and there's lots of agency workers, you've also got that added responsibility of knowing what you need to do before the end of the shift.* (Phoebe, SW then Student, No preference)

This was exacerbated in times of crisis by a feeling of moral responsibility.

> *Morally it felt hard to leave even if people were telling us to go, if there actually wasn't enough staff to deal with what was happening.* (Jessica, SW, No preference)

**Sharing responsibility: *"Asking each other 'what's the best thing to do here?'".*** Having a second registered nurse on shift allowed nurses to share decisions and the burden of care and thus access rest, both informally, by feeling less pressure from moment to moment, and formally, by taking breaks.

> *I do find it quite stressful because on my ward, people usually get restrained, like every day… you're making the decision yourself, and it's always nice to have someone there, just to talk over it, a bit of support. And 'cause the patients can be quite demanding and chaotic, when you're the only nurse on, it seems that you're the only one they come to, you need a bit of a break sometimes. So, if there's two of you on, the other nurse will take over for a bit.* (Becky, RMN, No preference)

In addition support from a well-staffed Multi-disciplinary team was reported to reduce the experience of lone responsibility. It was noted that this not necessarily the norm.

> *There's discreet Physical Healthcare Specialist Nurses who go round and are available to call and when you call them they're just happy to*

*help not like "Oh you're bothering me". They're like "this is what we're here for". It's just mind-blowing to me.* (Simon, RMN, LS preference)

**Culture and timeout: *"It's very difficult to impose your own thing".***

The ward culture strongly influenced the likelihood of taking rest, particularly regarding breaks and overtime. Team culture was described as very powerful and difficult to act counter to, even, in the case of Samuel, when it contributed to burnout.

*I guess because, as part of a team you don't want to feel like you've let people down. I was, not pressured into doing [extra shifts], but kind of talked into it, maybe, felt obliged to do it. ...I actually went off sick for a while, because I was just burnt out I just needed a bit of time off.* (Samuel, RMN, LS preference)

Teams were described to either indirectly discourage or overtly encourage taking breaks.

*You have to be very strong-minded, strong-willed to go against the grain and say "Well, I'm taking my break". 'cause I went into that team as a young-ish, as a new, Staff Nurse so it's very difficult to impose your own thing.* (Simon, RMN, LS preference)

*The Ward Sister is very good, she insists that we take our breaks. It's a rule in the ward that you take your break. No excuses.* (Eve, RMN, LS preference)

**Category 4: Being Part of a Team**

A range of team relationships was described, with some nursing staff having experience of being part of a "strong team" in which they felt sustained across a long shift. Other nursing staff felt judged and belittled by their team, which had a negative impact on their experience of working long shifts.

**The experience of being part of a team that sustains: *"Strong Team".***

Nursing staff highlighted that intensity of work both made being part of a strong team crucial and helped form enduring bonds between teammates. Strong teams were described as like "family" or "friends" with open communication and support feeling almost informal.

> *We were a bit like a family. Everyone knew what each other's strengths and limitations were. I think we were quite transparent compared to a lot of other teams that I have worked within. Because you are in a situation where, you cannot be bullshitting people and there cannot be cliques and there cannot be any airs or graces.* (Katie, SW then Student, No preference)

When in strong teams, nursing staff described being confident that they would not be let down and feeling valued and cared for.

> *Just to have that acknowledgement of "How are you?" is actually really nice. It sounds silly but, all day, you are caring for other people, you are giving someone else the best care that you can, you forget about yourself almost.* (Abby, SW, LS preference)

Nursing staff in strong teams described supporting each other when feeling frazzled and under pressure. Relational support was through humour, "venting" to one and other, or by bringing in treats and making hot drinks. Practical support was also offered when others were overwhelmed, for example covering an impromptu break when a teammate needed space; or stepping in with a patient when a teammate was running out of goodwill.

> *I suppose it's silly things, we all make each other cups of tea and look out for each other, so if you do see someone tired or someone is getting frustrated and a bit snappy, to make sure that they do try to go and have five minutes.* (Sarah, RMN, No preference)

A strong team would also worked together to help each other achieve tasks. Examples included a manager who would regularly relieve staff by spending time on

the unit floor, so they could complete their paperwork; giving each other time in the office or insisting that someone go to an important meeting despite knowing it would be hard work with one less nurse available.

> *If we needed to do a report we would say "Right, go upstairs and just get it done" and, even though I knew that she would struggle downstairs, and vice versa, we knew how important it was to do it.* (Ella, RMN, LS preference)

Nursing staff in strong teams described feeling motivated by their team, having confidence in the team, and feeling built up by the team's confidence in them. Ultimately working long shifts was described as more manageable when part of a strong team.

> *To begin with, because there wasn't as much of the team working it was almost scary because you felt like you were on your own, with this big long shift to get through… as it got better then the team bonding and everyone getting along really well it became a really good environment… I didn't mind being there for so long because you were there with your friends".* (Phoebe, SW then Student, No preference)

**When nurses did not feel supported by their team: *"Interpersonal conflict".***
In comparison nursing staff in other teams described "bitchy" and competitive environments in which being open left them vulnerable to feeling judged. They described feeling the impact of working long hours, of being frazzled, but that others would not care about this and expect them to be able to work at 100%.

> *Not caring about the fact that you were tired and just expecting you to still be at your best.* (Cleo, RMN, SS preference)

A feeling of competition rather than collaboration was described variously as: criticism of work; a sense of others not pulling their weight, or being seen as the person who is not working properly.

> *They would always be telling you if you'd done something wrong and that was not friendly.* (Jane, SW, SS preference)

Gossip and cliques were also described to be a problem in conflicting teams.

> *I just found it, for me, very bitchy. A lot of staff members slagging off other staff members, or talking behind people's backs*. (Samuel, RMN, LS preference)

The effect of being part of a competitive or "bitchy" team was, unsurprisingly, negative, leading to feeling weak, judged and angry.

> *They would make you, and make other people, feel very incompetent… feel pretty helpless and just angry, because it was like bullying…feel like I was constantly being watched, I would have to justify my actions, like they would always pick at something that you had done. I wouldn't want to be around those who you would have to be around.* (Jane, SW, SS preference)

Finally there was also potential for negative relationships within the team to overtly damage patient care.

> *I have worked on wards where interpersonal conflict has spilled over onto the shop floor, in front of the patients, it's affected patient care and to me that's just a massive no.* (Simon, RMN, LS preference)

**How long shifts influenced team relationships: *"Hope that you could build up those bonds".***

In addition to team relationships influencing nursing staff experience of long shifts, long shifts influenced staff experience of team relationships. This was in four principal ways:

First, that being frazzled by working long hours may lead to negative interaction.

> *I think I get a bit snappy sometimes, with people, not necessarily the patients, maybe with my colleagues. That's just tiredness*. (Sarah, RMN, No preference)

Second, that long hours spent with teammates magnified relationships, either amplifying the opportunity to grow together, or emphasising negative interactions.

> *It would get a bit annoying if you were in a team where there was a lot of conflict or personality clashes, that kind of thing, but generally, I found that you could support one another and develop a degree of camaraderie across the shift.* (Tom, RMN, LS preference)

Thirdly a regular shift pattern, where staff were divided into two teams working opposite shifts, was reported to increase both the strength of team relationships and potential for cliques. This was described to build relationships within the team, however it also had the potential to create an 'us'/ 'them' dynamic between teams.

> *I liked the set shift patterns. But it could become a problem …because you'd always be working with the same team, which I thought was really, really good, but sometimes there could be, a bit cliquey, which isn't very good…. if you were a new member to the team you might feel a bit outsider-y... people being a bit like "oh our team does it this way".* (Phoebe, SW then Student, No preference)

Finally the way in which long shifts were decided upon, whether they were optional or imposed, impacted how respected nursing staff felt as part of the wider team. Nursing staff who could choose their shift length spoke of feeling valued and appreciating the knowledge that if their circumstances altered they could return to short shifts. When shift length was dictated however, there was a sense of injustice and of not being valued.

> *A lot of it comes down to autonomy and the need to feel respected. I think when you get shift patterns enforced on you, it can feel infantilising. You want to say "I am a qualified professional"... It is being trusted, as long as*

*your performance is up to a certain level then I should be entrusted to make that decision.* (Tom, RMN, LS preference)

**Category 5. Getting the most out of Time Off**

Working long shifts impacted on staff home life. It precludes time off during working days and in its place gives additional days off. Nursing staff experience of long shifts was strongly related to their experience of being able to get the most out of their time off. The benefit of extra days stood out. The way in which rotas were decided, whether they were fixed or irregular work patterns, also influenced how nursing staff got the most out of their time off.

**Extra days off created by the long shift: *"An opportunity to do more things".***
By working long shifts additional days off are gained. This was widely appreciated with the days used for rest, leisure activities, socialising, studying, sports, shopping, house-keeping and to manage care commitments. The clear divide between work and home life was a reported benefit of time off in full days, rather than portions of a day.

*I had young children at the time and it meant that I was fresher on my days off, for them. I would say it made a clear divide between a work day and a day off which suited me.* (Tom, RMN, LS preference)

When compared to evenings and mornings off when working short shifts, it was reported that more could be accomplished in the whole day off. This was described as being more satisfactory and a principle reason for working long shifts.

*If you do an early shift you can get to three o'clock and you're full of motivation but when you do get home you're just knackered … it's very difficult to do anything meaningful in the free time. Whereas the long days... the day is clear for what I need to do.* (Simon, RMN, LS preference)

Additional days off were described as a desirable recompense for the intensity of long shifts.

> *Even though the actual work is probably harder… I like having four days off a week. That is lovely, really nice and I would hate to give that up.* (Ella, RMN, LS preference)

Long shifts, by reducing the amount of days on shift, also reduced time spent preparing for and travelling to work, creating additional leisure time.

> *It is not just the hours you spend at work it is the hours you spend commuting and it is the hours you spend preparing… the savings you make, in not having so many of those times, it is beneficial*. (Tom, RMN, LS preference)

Nursing staff described using the first of their days off to recuperate, rest and complete house tasks. This meant that the remaining days could be used for leisure, this compared favourably to short shifts, with it reported that two days off were often not enough for recuperation, tasks at home and leisure.

> *One of the days off would be where you were shopping, cleaning, doing all your boring life things, whereas if you get more days off, I've still got days to have a life, to do things away from work, whereas when I was on shorter shifts and less days off, having them I felt like I had less days just to be off.* (Sarah, RMN, No preference)

Nursing staff that worked irregular long shifts would sometimes receive single days off. In addition to being insufficient for recovery for the following shift (Category 3) this was also found to be unsatisfyingly short during the time off.

> *Having one day off here and there, I do not feel like it is very good, very helpful. You have not really had time off because you have your day off and you have to do all your jobs, your shopping, tidying, all your bits and pieces. You feel like that you have not had time to do what you really want to do and then you are back…* (Bethany, SW then RMN, SS preference)

**The benefits of a fixed rota: *"There was always a pattern".***

Some units use a 'fixed rota' in which shifts are organised in a repeated pattern. for participants in this study this fixed pattern was across two weeks; an example of this is shown in Table 6. The alternative to a fixed rota was an irregular rota, with shifts decided by the unit manager or senior nurse in chunks of four to eight weeks ideally a month or two in advance. Among nursing staff with experience of working both, fixed rotas were clearly preferred. One nurse (Samuel, RMN, LS preference) described moving to a fixed rota as a "revelation".

Table 6: *Fixed rota example*

| | **Mon** | **Tues** | **Wed** | **Thurs** | **Fri** | **Sat** | **Sun** |
|---|---|---|---|---|---|---|---|
| **Week 1** | Long shift | Long shift | Day off | Day off | Day off | Long shift | Long shift |
| **Week 2** | Day off | Day off | Long shift | Long shift | Long shift | Day off | Day off |

Fixed rotas were helpful for management of personal time as nursing staff could plan ahead.

> *I could work out what I was doing months and months in advance, which I really liked.* (Phoebe, SW then Student, No preference)

When considering irregular shifts nursing staff described a tension before receiving their rota, due to the influence that it had on their personal time.

> *I have never liked not knowing what I am going to do, when I am going to do it, when people say "Can we come up to stay this weekend?" I would say "I do not know, I will have to wait until the rota is out".* (Cleo, RMN, SS preference)

> *It is like your life is in someone's hands for the next six to eight weeks.* (Amelie, RN, SS preference)

The familiarity and relative certainty created by a fixed shift pattern was helpful for nursing staff for visualising their lives; knowing that they would have a minimum of two days off, for predicting what was coming up, as well as reassuring themselves that they were not doing anything they had not done before.

> *Knowing that I would only ever do a maximum three shifts in a row was really quite nice… then if things were quite challenging or difficult, you could be like "Right, fine, I have got so many days off, I will recover, come back, start again, fresh head".* (Bethany, SW then RMN, SS preference)

**Summary of Categories**

Five categories emerged from framework analysis. These were:

**1. Being present and being absent** across the long shift. This included the organisational and relational benefits of being present from morning until night. Benefits were tempered however by the negative impact of being absent for multiple days a week and the impact of losing crossover.

**2. Using up personal resources** when working long shifts. Nursing staff reported emotional burden across the long shift, leading to fatigue. This particularly related to working with patients who were distressed or risky. Fatigue was reported to interfere with therapeutic rapport and was linked to reduced vigilance.

**3. Getting rest and why it can be difficult** when working long shifts. This category detailed report of the benefits of taking good quality breaks; primarily that they moderate fatigue. Barriers to rest were reported. Sharing responsibility, a team culture that promoted breaks and multitasking during travel, helped nursing staff access rest.

**4. Being part of a team** when working long shifts. This category highlighted the positive impact of being part of a supportive team, and how it made working long shifts in mental health feel more manageable. Conversely being part of a weak team magnified the burden. Working long shifts was reported to magnify team bonds for better or worse.

**5. Getting the most out of time off.** Working long shifts compressed the working week and increased days off. This was reported to be the principal benefit and

attraction for working long shifts. Organising personal life was described to be easier when working a fixed rota.

## Discussion

The categories and subcategories that emerged in the analysis will now be examined in the light of related research and models. This is with consideration of how the existing literature informs these findings and also how findings complement and expand existing literature. The focus is on exploring nursing staff experience of long shifts in a mental health setting, the perceived impact of long shifts on wellbeing and patient care and the factors which nursing staff believed influenced this. The study's limitations and strengths will then be examined before practical implications are considered and conclusions are drawn.

### Category 1. Being Present and Being Absent

#### Managing work across long shifts: Job satisfaction.

There were a variety of views as to whether being present on shift for 12 hours at a time aided or hindered completing tasks. These varied views fit with mixed reports of job satisfaction and long shifts found in reviewed literature (Harris, Sims, Parr, & Davies, 2015). On the one hand some nursing staff reported finding it hard to pace themselves across a long shift and experienced increased anxiety at the variety of tasks they needed to "juggle" for 12 hours. On the other some nursing staff reported satisfaction at being able to complete a variety of tasks within a single shift, as well as having longer in which to fit excursions with patients across the day. There was no particular distinguishing factor noted that led to nursing staff finding task management across long shifts easier or harder.

The view that longer hours create time to complete tasks is supported by Dwyer, Jamieson, Moxham, Austen, & Smith (2007) who found extended opportunities to complete tasks was a reported benefit of long shifts for intensive care nurses. Further support comes from Thomson, Schneider and Hare Duke (2017) who found that nurses described a sense of ownership and control of their tasks as they could complete them within 12 hours.

#### Nursing staff availability across long shifts: Quality of care.

Nursing staff in this study spoke of having time to complete all forms of work within one shift, including paperwork, contacting wider services and spending additional time with patients. Thomson et al. (2017) noted that support workers in

mental health settings spoke of having time to achieve more with patients when working longs shifts whereas support workers in other settings focussed on this less. Quality therapeutic time is harder to measure than other tasks, like administering medication, physical care or paperwork, which are either done or not done. The benefit of having increased time for patients when working longs shifts may be of particular impact in a mental health setting, as therapeutic time may be superseded by other, more definable tasks when time is short (Cunningham, Kennedy, Nwolisa, Callard, & Wike, 2012).

Nursing staff shared that they felt being present across the whole day communicated solidarity with patients. For example, if a patient started the day struggling they knew the same person would be with them until bedtime. Similarly, support workers in Thomson et al. (2017) reported that long shifts helped build trust and rapport. Richardson, Turnock, Harris, Finley, and Carson (2007) reported that long shifts improved relationships with patients. In the current study it was noted that this was particularly helpful on a dementia unit, where in addition to the nurse gaining an understanding of the patient across the day, the patient was able to build familiarity while remaining disconnected from time and place.

Being absent for a series of days every week was reported to be detrimental to the therapeutic relationship. Nursing staff noted feeling disconnected when returning from a series of days off and sadness at missing important events. In contrast to the report that being present for 12 hours was beneficial to therapeutic relationships (both in this study and Thomson et al. 2017), it was described that the pattern of being very present and then very absent disrupted relationships. It was suggested that being on shift for shorter periods more regularly was in fact better for continuity. This report fits with wider research which finds that consistency promotes the development of trust (Yee Man Poon, 2014) and the building of therapeutic relationships (Forchuk & Reynolds, 2001; Cheryl Forchuk et al., 2000; Johansson & Eklund, 2003).

It appears therefore that the breadth of focus on long shifts influenced whether they are perceived to be positive or negative for the therapeutic relationship. When the focus was on a single shift, being present for 12 hours was reported to increase understanding of patients and communicate solidarity. However when the focus was on the whole week, the opposite was reported; regularly taking three to

four days off led to missing significant events and a sense of not being reliably there for patients across the week.

Nursing staff on fast paced units reported the benefit of being able to get to know newly admitted patients rapidly over a series of two or three long shifts. They also reported difficulty keeping up and missing out on significant events when off the unit for three or four days each week. It appears then that advantage of long shifts and rapidly building therapeutic relationships on fast paced units is dependent on admission coinciding with shifts. While the timing of an admission often cannot be planned, this finding has implications for assigning key workers; where possible nurses who are beginning a series of long shifts may be better placed as a key worker than those who are soon to start their days off.

Disconnect created by multiple days off was aggravated on units where handover was short. In this study, handovers as short as 15 minutes were reported. Nursing staff said that this was often insufficient; there was only enough time to cover the risk and highlights of the previous shift and not to cover the preceding days. Nursing staff reported feeling that they let patients down by not knowing what had occurred in their absence and feeling personal and professional embarrassment at being ill-informed. To supplement insufficient handovers staff sought informal handovers from colleagues and consulted notes during the shift. Such accounts highlight the importance of regularly creating enough space for a relevant and informative handover following a series of days off.

In Richardson et al. (2007) 147 nurses from three units in one UK hospital filled out questionnaires. Of these nurses 83% reported that there was sufficient time for handover following their move to long shifts, although only 59% agreed this handover was of high quality. Similarly only six out of 10 nurses interviewed from a UK hospital (Gillespie & Curzio, 1996) reported that the half an hour handover available for every 24 hours was adequate, with it reported that improvements in communication were necessary. The current study found evidence that insufficient handover time caused staff and (apparent) patient discomfort. Therefore units using long shifts are advised to prioritise time for high quality handovers.

**Crossover.**

The loss of crossover was reported to reduce job satisfaction and quality of care. When short shifts are used, either alongside long shifts or on their own, a

crossover period is created in the middle of the day, as there are increased numbers of staff (Sprinks, 2012). One view shared in this study was that these crossover periods were often not used resourcefully. While this may be the case on some units, it was evident that on other units nursing staff made good use of crossover. Nursing staff spoke of valuing crossover as it allowed them to allocate time for their own development and patient care, for example to attend training, meetings and supervision. This "slack hour" was also helpful for keeping on top of tasks, and thus reduced workload anxiety. In addition, crossover was used to spend quality time with patients, including facilitating outings, and so was seen to improve quality of care. For these reasons, staff said that no longer having crossover was a disadvantage of long shifts, both to their nursing experience and for their patients. This report concurs with Reid, Todd and Robinson (1991) and McGettrick and O'Neill (2006) who found reduced opportunities for teaching and training, following a move to long shifts. McGettrick and O'Neill (2006) suggested that study days be introduced to make up for lost crossover. This would replace teaching and training time, but it would not address the loss of regular flexible time that may be used therapeutically with patients.

### Category 2. Using up Personal Resources

#### Emotional labour.

Tiredness, or feeling "frazzled", was prominent in nursing staff' experience of working long shifts. Nursing staff described a range of interactions with patients that drew on emotional resources. These included supporting patients through flashbacks, patients with low mood, tolerating heightened behaviour and working with people disoriented as to time and place. Nursing staff described this work as draining, or adding emotional load. Such descriptions of the burden of emotional work in mental health care were not unique to working long shifts, for example similar accounts were given by Swedish nurses who work with people who self harm (Wilstrand, Lindgren, Gilje and Olofsson, 2007) in a study that was not exploring the effect of length of shift. What was unique was the duration that nursing staff worked with this emotional load, leading to increased levels of fatigue.

#### Fatigue.

In this study the cost of empathy and emotional labour (Badolamenti, Sili, Caruso, & FidaFida, 2017; Hochschild, 1983) was an experience of fatigue by the

final few hours of the shift. Nursing staff compared this to working short shifts, when they described generally being able to hand over before becoming fatigued.

Nursing staff described fatigue developing within a single shift. Chen, Davis, Davis, Pan and Daraiseh (2011) also found notable energy expenditure from working a single long shift. In their study energy expenditure was in relation to physical labour, in this study, in a mental health setting, the focus of participants was on fatigue created by emotional labour. Nursing staff noted cumulative fatigue across a series of shifts, with it described that patients could tell they were on their final shift with phrases like "you just cannot function" (Cleo) used. This finding of conspicuous fatigue during a run of long shifts is one supported by multiple other studies (Chen, Davis, Daraiseh, Pan, & Davis, 2014; Flo, Pallesen, Moen, Waage, & Bjorvatn, 2014; Geiger-Brown et al., 2012; Szczurak, Kamińska, & Szpak, 2007).

Increased fatigue was experienced while working on units where violent incidents, like self harm, were more common. Nursing staff spoke of weariness that was the product of being on high alert for the entire shift, a feeling of having "ran a marathon" (Grace). Nursing staff with experience of units where these incidents were daily occurrences found they were more drained emotionally than on units where violence was less common. This experience fit well with the Job-Demand-Control Model (Karasek, 1979) which proposed that increased work load and work conflicts lead to physical and emotional demand, such as increased fatigue.

Nursing staff in this study attributed their improved experience of long shifts to a change in client group. It is worth noting, however, that in many of these examples, in addition to changing client group, nurses also changed roles. For example, Phoebe and Katie moved from being support workers to becoming student nurses, and Simon switched from RMN band 6 to band 5. These changes will also have altered job demand, with changes in level of responsibility and job role. In the case of Phoebe and Katie becoming student nurses, this would have required learning how to accomplish registered nursing tasks and an increase in job demand. However, as trainees they were on short term placements, rather than in teams as permanent members of staff.

Gillespie and Curzio (1996) found from their interviews with nurses, that moving to long shifts reduced fatigue. This finding was not supported by this study.

No nurse stated that fatigue was reduced by long shifts. The closest view to this was that long shifts were "do-able" when there was time to rest between them.

**Fatigue and quality of care.**

Nursing staff perceived that increased fatigue negatively impacted on their interaction with patients, reducing quality of care. Feeling drained and exhausted in the final few hours of the shift led to an experience of "floating along"; of responding to patients but not initiating conversation or activities or going beyond what was necessary. This reduction in proactivity relating to fatigue was also found by Szczurak et al. (2007). In their questionnaire-based study of 108 nurses in Poland, a decrease in activity and a corresponding increase in fatigue was reported by nurses working long shifts. Furthermore, when Chen et al. (2011) monitored energy expenditure in 145 nurses across a long shift, they noted that the pace of work decreased at 3pm; it was hypothesised that this was to preserve energy. Finally Todd, Robinson and Reid (1993) observed that nurses working 12 hour shifts spent proportionally less time with patients than those working eight hour shifts. Potentially, as in this study, this related to preserving emotional energy across the long shift.

Nursing staff also described becoming more irritable and short tempered with patients and colleagues when feeling fatigued. This chimes with Thomson et al. (2017) who have "negative impact of staff fatigue" as a theme in their interviews with support workers. Included in this was feeling tired in the final few hours of the shift and this was linked to reduced tolerance of others. Nursing staff also spoke, with some discomfort, about a change in motivation as they became more fatigued; motivation moving from achieving high quality patient care to getting to the end of the shift. Nursing staff spoke of being able to reliably predict fatigue in the final hours of their shift and so they booked therapeutic interventions with patients in the first half, when they anticipated being more energised and engaged. This was described to be an effective strategy to work around fatigue and indicates that the "pacing effect" found by Todd et al. (1993) may be a planned rather than reactive approach.

While some patient interactions could be planned others could not. Nursing staff reported feeling too fatigued at times to manage patient interaction in the final hours of the shift, this was particularly the case following a run of long shifts. At

these times examples were given of hiding away from patients or not responding positively to patients who were seeking care. Nursing staff spoke of finding themselves in this situation less often when working short shifts, as they felt less fatigue and could "see an end" to the shift. The findings of a reduction in talking with patients by nurses working long shifts (Griffiths et al., 2014) and a reduction in direct patient care (Reid, Robinson, & Todd, 1993) could be linked to the fatigue-driven avoidance described by nursing staff in this study. The prominence of fatigue-driven avoidance in this study is likely to be due to the complex relational interactions required when working in a mental health setting (Dziopa & Ahern, 2009).

**Fatigue and reduced job satisfaction.**

Often when nursing staff reported a reduction in quality of care relating to fatigue, it felt almost like a confession, with equivocations like "it's not something I'm proud of but… it's the only way, personally, I can get through it" (Amelie). These qualifications were felt to indicate personal discomfort with the difference between how nursing staff would ideally like to work and how they were able to work when fatigued. This dissonance and discomfort was also captured by Thomson et al. (2017). In their study, support workers spoke of their professionalism counteracting the impact of fatigue. Thomson et al. (2017) however suggest that this is a defence against criticism of the support workers' work. This cognitive dissonance between what nursing staff hope to achieve and what can be achieved is likely to lead to reduced job satisfaction. This may contribute to explanations of increased job dissatisfaction and burnout, measured in nurses working long shifts, in analyses of large data sets (Dall'Ora, Griffiths, Ball, Simon, & Aiken, 2015; Stimpfel et al., 2012).

**Fatigue and patient safety.**

There is a body of research that shows a relationship between increased shift length and reduced patient safety in physical health settings (Ball et al., 2014; Dall'ora et al., 2016; Griffiths et al., 2014; Stimpfel & Aiken, 2013). There is overlap in risk found in physical and mental health settings, like risk relating to medication. There are also notable differences between settings, for example risk in mental health settings commonly includes patient suicidal ideation and violence, including use of restraint (Sethi, Parkes, Baskind, Paterson, & O'Brien, 2018), this is

less common in physical health settings. In the current study nursing staff reported that increased fatigue negatively impacted patient safety.

In this study nursing staff linked increased fatigue to reduced vigilance. Their subjective experience of reduced vigilance is supported by a larger observational study of nurses that found moderate lapses in attention in nurses during long shifts (Geiger-Brown et al., 2012). An example of a lapse in this study was finding it harder to remain alert towards the end of a shift during one to one observations; a routine practice used when a patient is a danger to themselves or others. Similarly, in physical health care, reduced performance in routine safety measures, like hand washing, has been found (Chudleigh, Fletcher, & Gould, 2005; Fitzpatrick, While, & Roberts, 1999). This finding that fatigue may impact safety in a mental health setting warrants further investigation, for example into how fatigue may influence routine risk management.

A further example given was feeling more likely to make an error giving evening medication. Supporting this research into long shifts in settings other than mental health found evidence of increased error relating to increased fatigue. For example in their cross sectional study of fatigue and error, Rogers, Hwang, Scott, Aiken and Dinges (2004) found those working shifts of 12 hours and over were three times more likely to report error (including medication error) than those working short shifts.

### Category 3a. Getting Rest and why it can be Difficult

With fatigue a prominent issue for nursing staff, it was fitting that accessing breaks was another conspicuous category emerging from analysis. Nursing staff described that when there were sufficient periods of rest, this moderated their experience of fatigue. There were varied reports as to whether there were sufficient opportunities to rest during and between shifts.

#### Breaks on shift.

Nursing staff who found breaks helpful, did so for a variety of reasons. They reported using breaks to rest and refuel, by sitting, napping, eating and using them to socialise. The importance of breaks was highlighted by the description of when they were missed; this would lead to feeling hungry and tired, to the point that it was perceived to affect staff/patient interaction. This concurs with the finding of

Thomson et al. (2017); support workers in their study also reported using breaks to rest and refuel to reduce the effects of fatigue.

Nursing staff in the current study also described being able to step back from the shift during breaks, both physically (by leaving the unit) and mentally. Stepping back offered a valuable opportunity to gain a wider perspective, for example highlighting that the strains of the shift were just a part and not the whole of the staff member's life, thus making the shift feel more manageable. Just as nursing staff noted that breaks facilitated a broader perspective, they also noted that missing breaks led to feeling immersed in the work. This led to finding reflection and decision-making harder and to reported increased anxiety. The perception that breaks helped nursing staff gain perspective may add to an understanding of Chen et al. (2011)'s finding, that nurses working long shifts who took fewer breaks reported a higher perceived workload. However it remains possible that these nurses worked through because their workload was, in fact, greater.

Nursing staff reported that taking predictable breaks meant they could mentally divide their long shift into two or three parts. Dividing the time made the long shift hours feel more manageable; this was described to improve motivation and energy levels. Nursing staff who were able to leave the unit or hospital spoke very positively of this, saying that they found taking a walk or running personal errands a very effective way to step away from work and revitalise. These reports add further understanding to how breaks are used to reduce fatigue, adding context to the findings of Thomson et al. (2017) and Dall'ora et al. (2016), who conclude that timely breaks reduce fatigue.

Other nursing staff spoke of not valuing their breaks. This tended to relate to an unclear boundary between being on shift and being on break. For example, continuing to carry an alarm on break with an expectation that they respond if it sounds, or having breaks interrupted by colleagues with messages and questions. This restricted the distance someone could take from the unit, both physically and psychologically. Nursing staff with multiple short breaks spoke of these being subsumed by the shift. Others with longer breaks, but that had to be taken on the unit, spoke of becoming bored. When breaks were found to be unhelpful, nursing staff spoke of becoming aware of how tired they were during the break and perceiving it to be easier to just carry on working and not connect to this discomfort.

Dall'ora et al. (2016) highlight that an improved understanding of the quality of breaks is crucial for understanding the relationship between breaks and fatigue. The current study found characteristics that were positively linked to breaks that were perceived to reduce fatigue and build a broader, more manageable perspective. These were: 1) One long break (as opposed to two short breaks) as these were less likely to be lost in the surrounding shift as well as facilitating other activities off the unit. 2) A clear boundary between being on break and being on shift. For example, being able to leave the unit or not carry a responder alarm during the break. This requires sufficient staffing.

**Breaks between shifts.**

Nursing staff explained that there was insufficient time to both unwind *and* get a good night sleep between long shifts. In particular, participants shared that when events on shift were emotionally draining there was insufficient time to reflect, and that this disrupted sleep. This report of reduced sleep is in line with observational studies which found nurses achieved between five and six hours sleep on average between shifts (Geiger-Brown et al., 2012; Rhéaume & Mullen, 2017) and a more general study that showed increased working hours led to reduce hours of sleep (Basner et al., 2007).

The importance of processing complex emotions from shift, of offloading following 12 hours of emotional labour, was illustrated in this study by reports of multi-tasking in order to fit such processing in. Nursing staff described using their travel time to reflect with colleagues over the phone, or when alone in the car using the space to express emotion. These techniques were described to be very valuable and enabled staff to put their work aside upon getting home.

Another technique was drinking or taking sedatives like alcohol or a type of tea illegally bought online, in order to fall asleep faster. This was a practical response to needing to maximise sleep between shifts. Nursing staff shared awareness of the problematic nature of this approach (for example, one nurse joked that she sounded like an alcoholic) and spoke of balancing this against their need for sleep. Use of alcohol to manage sleep deprivation in long shift workers has been documented elsewhere (Dorrian, Heath, Sargent, Banks and Coates (2017), and as a sedative, alcohol does reduce the time it takes to get to sleep (Roehrs & Roth, 2001). On the other hand, depending on the dose of alcohol, this may negatively alter sleep

composition (Roehrs & Roth, 2001) and increase likelihood of over 60 chronic illnesses (Dorrian, 2012).

That nursing staff reported needing to take measures, be they relatively healthy or unhealthy, to maximise the time between their shifts for reflection and rest, indicates that this time is generally insufficient. This was supported by nursing staff observation of increasing fatigue over cumulative shifts, both in this study and wider research (Flo et al., 2014) which indicates that there is not enough time between shifts to adequately recover.

### Category 3b. Barriers to claiming rest

Difficulty accessing breaks was a prominent narrative in this study. This was characteristic of wider mental health nursing, with 90% of UK nurses in a recent survey reporting that they miss some breaks, and nurses in mental health settings reporting the highest rate of missing breaks (RCN, 2017). In their qualitative analysis, Thomson et al. (2017) named a theme "ability to take breaks", as they also found accessing breaks a prominent issue for support workers. In line with this research, Thomson et al. (2017) also noted that participants in mental health settings reported particular dissatisfaction in their ability to take breaks. In light of the reported benefits of accessing breaks, and prevalence in missing them, it is important to understand what stands in the way of nurses taking breaks. From the current study, in addition to insufficient time and unclear boundaries, two further subcategories emerged which shed light on why breaks are missed: a sense of personal responsibility and team culture.

#### Responsibility.

Nursing staff reported that responsibility for the shift stood in the way of taking breaks and leaving on time. At times this responsibility was linked to skill mix. Support workers reported feeling greater responsibility for patients and remaining to complete tasks when they were on shift with bank support workers, who did not have relationships with the patients, or know how the unit worked in enough detail. Nurses spoke of a burden of responsibility when they were the only nurse on shift, and that this prevented them from taking a break. Account was given of increasingly being the only nurse on shift. Nurses spoke clearly of a preference for working long shifts with another nurse in order to share decision-making and

responsibility and so reduce the burden. Long shifts as the only nurse were described to be harder.

Thomson et al. (2017) also heard reports that staff mix stood in the way of taking breaks, in particular staff shortage, which increased workload and fatigue. Manipulating skill-mix on units, by increasing support worker posts and decreasing nursing posts, is a way of managing economic constraints and workforce shortages in the NHS (Jacob, McKenna, & D'Amore, 2013; Murray, 2017). However, nurses in this study reported that being the only nurse on shift decreased their job satisfaction, adding a burden of responsibility that prevented them from taking breaks. Furthermore, reports of increased confidence, when sharing responsibility with other nurses, is supported by RN4Cast data from five countries which found that a greater proportion of nurses on units was associated with better outcomes for patients (Aiken et al., 2017).

**Culture.**

The team culture around break-taking was reported to have a large impact on whether nursing staff felt able to take their break; this went positively or negatively. Nursing staff described feeling unable to a take a break on some units as they felt they would be not be seen as a team player. Another account was the positive influence that team managers could have on break-taking culture; when the manager said breaks were not optional, they were taken. This report supports the approach taken by a recent campaign by the RCN. This campaign "Rest, Rehydrate, Refuel" encourages managers to make their staff take breaks (RCN, 2018). It aims to help units change the culture to one that encourages breaks, for example, by encouraging nursing staff to model taking breaks so that others know that they can too.

**Category 4. Being Part of a Team**

Johnson and Hall (1988) in their Job-Demand-Control-(Support) model of occupational stress, place a high level of importance on the influence of support on experience of work. Findings in the current study fit well within their model; nursing staff reported that team relationships strongly influenced their experience of working long shifts. Working for 12 hours or more led to an experience of being frazzled and fatigued, however, being part of a functioning and supportive team moderated this in two ways:

First, when in supportive teams, nursing staff spoke of a close bond with teammates, which helped them to feel secure enough to talk about the impact of fatigue rather than needing to present a perfect professional mask, this chimes with the findings of Thomson et al. (2017). Nursing staff reported that being able to share how they felt, and supporting others when they also shared feeling fatigued, helped maintain their morale across the shift. Humour, venting and signs of care (like bringing in food) were all ways in which nursing staff felt and showed support for one another across sometimes very draining shifts.

Secondly, in addition to verbal and emotional support, nursing staff in supportive teams practically helped one another. Nursing staff spoke of creating unofficial breaks, so that a teammate could recover from fatigue or process difficult events. For example, accompanying someone on an unofficial cigarette break following an incident. These acts were reported to help nursing staff to recover from fatigue. Additionally, nursing staff in supportive teams created "slack time" for one another in the absence of crossover, with participants speaking of holding a shift so that another could complete their work, be it paperwork or time with patients. This was described to be stressful, but necessary, with responsibility for tasks seen as lying with the team and not the individual.

Just as 'strong support' (Johnson & Hall, 1988) was reported to make demanding work manageable; 'weak support' was reported to make demanding work feel impossible. Nursing staff in teams that provided weak support reported feeling judged for feeling fatigued with an expectation that their work would always be perfect and feeling like an outsider. Of the nursing staff who stopped working long shifts, a significant minority linked negative team interaction to their decision.

Previous research found evidence that being part of a supportive team improves job satisfaction (Collette, 2004; Kalisch, Lee, & Rochman, 2010; Ward, 2011). This study has illustrated ways in which this positive impact helps to moderate the damaging effects of fatigue when working long shifts in mental health care, while negative team interaction magnifies the demands of working long shifts. Nursing staff who experience being part of both a strong and a weak team described a transformation in experience from: "there wasn't much of a team, it was almost scary" to "I don't mind being there so long because you were there with friends" (Phoebe).

A further finding was the multiple ways in which long shifts impact upon team relationships, with both positive and negative impacts reported by nursing staff. Long shifts were found to magnify team relationships, leading to a feeling of camaraderie when relationships were positive or feeling stuck and dissatisfied when teammates did not get on.

**Category 5. Getting the most out of Time Off**

The additional days off created by working long shifts were described to be the principle attraction to this shift pattern. This was in line with the findings of multiple questionnaire studies (Bloodworth, Lea, Lane, & Ginn, 2001; Gillespie & Curzio, 1996; Iskra-Golec, Folkard, Marek, & Noworol, 1996; McGettrick & O'Neill, 2006). The amount of time off available when working a condensed week is the same as when working short shifts, however having the free time portioned into complete days was described to be more satisfying. All three male nurses were particularly positive about the clear divide between work and family or work and leisure time. This theme, of only needing to think of work or family or leisure at one time, was less prominent among female nursing staff, potentially indicative of social constructions of multitasking and gender (Szameitat, Hamaida, Tulley, Saylik, & Otermans, 2015).

The majority of nursing staff interviewed did not have dependents, however some spoke of colleagues making use of additional days off to manage childcare. One of the nurses who did have dependents made reference to childcare, explaining that when he and his partner both worked long shifts they could cover care responsibilities without using a nursery. Ease of childcare was a benefit of long shifts found by Bloodworth et al. (2001). Having to commute less often was also perceived to be a benefit in the current study, this was in line with Iskra-Golec et al. (1996).

Gillespie and Curzio (1996) found that extended leisure time was a principal benefit of long shifts; likewise, in this study, nursing staff reported using the extended time for leisure activities, socialising, studying and sports. Nursing staff reported that the first day off was generally used to recover from fatigue and complete housework that had built up over the long shifts. So while leisure time was extended, a notable portion of this was used to recover from long shift work. For this

reason, receiving only one day off was viewed very unfavourably; a finding corroborated by Thomson et al. (2017).

Past research has found a disconnect between nurse stated satisfaction with long shifts and large cross-sectional studies that find increased dissatisfaction and burnout in nurses working long shifts. One theory for this is that nurses focus on the appeal of additional days off, over the potential cost of decreased job satisfaction when at work (Fitzpatrick et al., 1999; Stimpfel et al., 2012). This study supports this theory: nursing staff explicitly referred to additional days off as compensation for more demanding shifts.

**Shift pattern.**

Nursing staff who worked a fixed shift pattern spoke positively of being able to plan months in advance. This was in comparison to nursing staff who worked irregular shifts, who shared frustration at not being able to plan their lives much in advance. This preference for predictable shifts fits within the Job-Demand-Control-(Support) Model (Johnson & Hall., 1988); knowing when they are working gives nursing staff control over planning their lives around work. With a fixed rota nursing staff also reported increased confidence that they could manage a series of long shifts, as they knew they had done this before and would receive more than one day off following them.

Working fixed shifts received a positive review within this study. One caution was given, however, when considering team dynamics. Nursing staff shared that when relationships worked well within their fixed team it felt almost like being part of a family. Although this closeness was beneficial within the team, it was reported that new or temporary members of fixed teams may feel like outsiders.

**Factor prevalence within typologies.**

Typologies are created to aid exploration of patterns within qualitative data. The typology used in this study was ‘stated preference of shift’, with three stances emerging: preference for long shifts, preference for short shifts or no preference. When examining nursing staff response, in light of typology, it was apparent that no one factor could be taken as a determiner of which group the participant was in. For example, while the majority of participants who stated a preference for short shifts had experienced being part of a weak team while working long shifts, there were

also some in this group who had positive or neutral team experience. As would be expected, those who disliked long shifts shared a greater proportion of negative experiences and opinions them than those who preferred long shifts. However, nursing staff who preferred long shifts were able to recognise drawbacks and those who preferred short shifts recognised benefits to long shifts also. Taking these two observations; that no one factor determined preference, and nurses in any of the three groups expressed positive and negative views, it is fair to conclude that preference of shift is the result of a balance of numerous factors.

**Therapeutic relationships.**

During analysis, a stand-alone category was initially created for the therapeutic relationship. It was found however that the views of nursing staff on the therapeutic relationship were entwined with other categories. The therapeutic relationship was therefore subsumed within the themes "being present and absent" and "using up resources".

Long shifts were reported to affect the therapeutic relationship. On the one hand the staff member could get to know new admissions rapidly when on multiple long shifts; and being present from morning until night was felt to communicate solidarity with patients. On the other hand working long hours caused fatigue in nursing staff, who noted having less energy for patients towards the end of the shift, and at times would avoid patients due to fatigue. So while nursing staff were present with patients the quality of interaction may be reduced. Furthermore being absent for over three days a week was felt to damage relationships, particularly on units where handovers were brief.

**Job-Demand-Control-Support Model.**

The Job Demand Control Support Model (JDCS, Johnson & Hall, 1988) provided a useful lens through which to view the results of this research. This model identified three key elements of work: job demand, job control and social support., Variables that nursing staff highlighted in this study fit within these three key elements, this is outlined in table 7. It is the way in which job demand, job control and social support are proposed to interact that shed additional light on the findings in this study, this shall now be explored In more depth within each of the three JDCS areas.

Table 7: *Factors that impact working long shifts within the Job-Demand-Control-(Support) Model*

| **Key area** | **Factors nursing staff report influenced their experience of long shifts on inpatient mental health units** |
|---|---|
| Job demand | Duration of managing risk |
| | Duration of emotional labour |
| | Time pressure between shifts |
| | Team conflict |
| Job control | Skill mix |
| | Fixed or irregular shifts |
| | Quality of breaks |
| | Length of handover |
| Social Support | Level of emotional support in the team |
| | Level of practical support in the team |
| | Responsibility shared by team or individual |

**Job demand.**

Job demand was increased when working long shifts compared to short shifts. Job demand refers to work load, including time pressure and emotional demand, increased strain in these factors created by long shifts were captured by the themes “using up resources” and “getting rest and why it can be difficult”. Increased job demand was explicitly acknowledged by staff, who saw additional days off as the reward for increased strain. Job demand was increased due to the longer duration that nursing staff performed emotional labour. In particular the intensity of therapeutic relationships and patient emotional need on mental health units led to nursing staff using up their emotional resources. Nursing staff regardless of their shift length preference reported this pattern. Furthermore pressure meant that nursing staff reported insufficient rest between a run of long shifts. Increased duration of emotional labour with poor sleep is a consequence of long shifts on mental health units.

**Job control.**

Job control refers to the extent to which someone has the power to decide how to do their job and to have the opportunity to use their skills and make decisions. Variables relating to job control (outlined in table 7) are found throughout the findings of this research, within all themes, illustrating the varied ways in which job control may be achieved. There are two main theories as to how job control and job demand interact with each other. Job demand is seen to put strain on a worker. Lack of job control can be seen as another form of strain. This is the "strain hypothesis". Another way of viewing job control is that it buffers the impact of job demand; thereby reducing the strain of job demand. This second theory, the "buffer hypothesis" (illustrated in figure X) fit well with nursing staff description of their experience, with job control described to moderate the demands of emotional labour and time pressure.

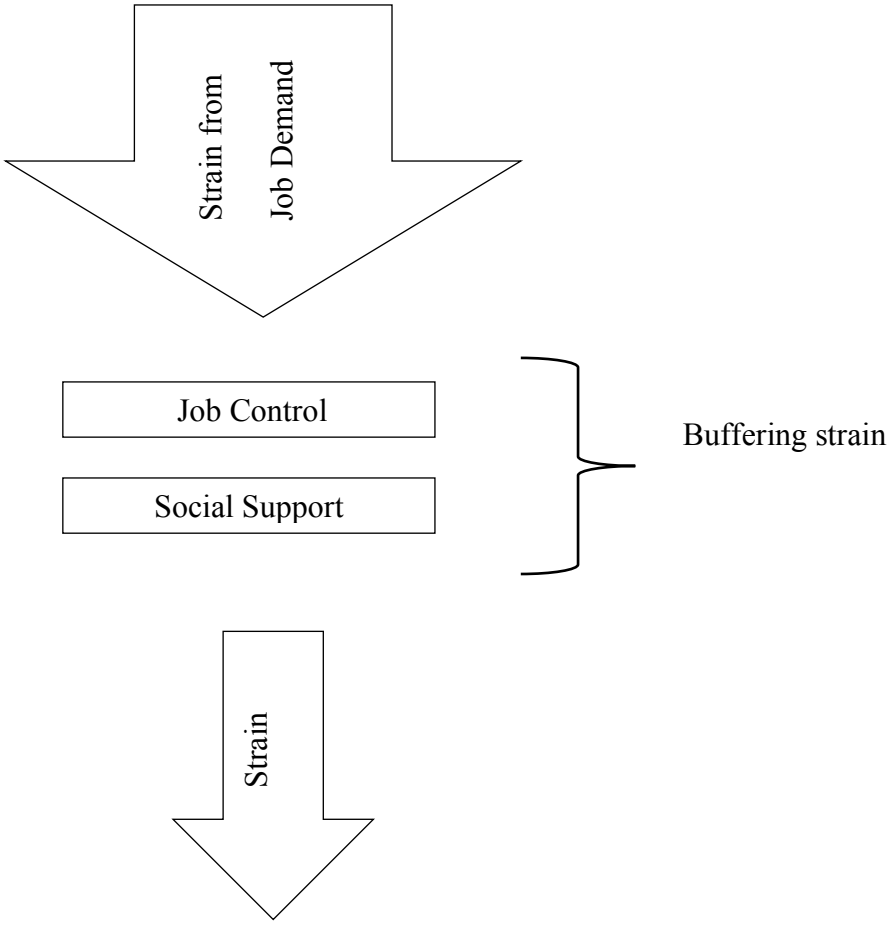


**Figure 5: Illustration of the Job Demand Control Support Model buffer hypothesis**

One form of job control was access to good quality breaks. A good quality break was a single long break that was not interrupted by work and in which the nursing staff could leave the hospital. The effect of good quality breaks was to moderate the fatigue of emotional labour and time pressure and so enhance energy and motivation.

The extent to which nursing staff could decide how to do their work, and use their skills (both forms of job control) was strongly influenced by the wider team. Nurses' roles were restricted when they were the only nurse on shift; responsibility increased and they did not have a peer to share qualified tasks and decisions with. In these cases job demand was not buffered by job control, and nurses reported high levels of strain. When more than one nurse was on shift this notably increased job control, reducing the pressure of job demand; nurses had more discretion in how to use their time and skills and could access breaks knowing that another nurse would oversee the unit. Having access to an available MDT also increased job control and so buffered job demand.

The increased staffing created by crossover seen on units that use short shifts created an oasis of time that nursing staff could use flexibly and so increased job control. Using only long shifts removed crossover, making units cheaper to staff but also reducing job control. The loss of this "slack hour" removed a useful buffer that was used to spend time with clients, catch up on paperwork, arrange meetings, take breaks or attend training. Nursing staff noted increased anxiety when they did not have this buffer.

How shift patterns were decided also impacted job control in a variety of ways. Nursing staff showed a preference for a fixed shift pattern as opposed to an irregular shift pattern. With a fixed pattern nursing staff could plan in advance, with an irregular pattern nursing staff were required to wait until the next rota was published, thus reducing control over forward planning.

**Social support.**

Like job control social support was described to act as a buffer to job demand, this is captured in the theme "being part of a team". Without a strong team description of long shifts were raw, with one support worker calling a long shift "almost scary" without a team. Nursing staff in strong teams effectively supported each other, both emotionally and practically. Emotional social support allowed

nursing staff to process their emotional labour, diffuse strain with humour and feel more confident managing their workload. Practical social support included nursing staff giving each other valuable time out, completing tasks as a team and sharing responsibility- these acts buffered emotional time demands, reducing the strain of job demand.

Within the JDCS model negative social interactions may sit within job demand. These interactions go beyond the absence that is "poor" social support to the creation of conflict, an additional emotional burden of the job. Nursing staff who reported being in toxic teams described feeling helpless and angry. This makes sense within the buffer hypothesis as their job demand was both increased by team conflict and not buffered by social support.

**Action from JDCS Model**

The JDCS model fitted well with the findings of this research. This model underscored that using long shifts on mental health inpatient units does increase job demand. This was due to the duration of emotional labour and restriction of time to recover between shifts. This conclusion highlights the need for management to think carefully before using long shifts, and not to view them as an equivalent alternative to short shifts.

Nursing staff reports supported the buffer hypothesis of the JDCS: that job control and social support can buffer the strain created by increased job demand. Therefore when long shifts are used, in response to restricted funding or due to nursing staff requesting additional days off, these buffers should be put in place to moderate increased job demand. Such buffers may allow nursing staff and trusts to safely access the benefits of long shifts.

The JDCS Model focused on strain put on the worker. The effect of high job demands, poor job control and social support had ramifications for patients also. In this study nursing staff noted that increased fatigue negatively impacted interactions with patients. Moderating the increased strain of job demands when working long shifts would therefore also improve patient experience.

Long shifts are widely used (Ball et al., 2014) and there is evidence that they increase fatigue. It is proposed therefore that a set of standards be created for Trusts to sign up to if they intend to make use of long shifts. These standards would acknowledge increased job demand of long shifts and the need to buffer this with

healthy levels of social support and job control. Trusts would sign up to practices that strengthen job control and social support. Such practices are outlined under 'implications for practice' below.

**Strengths of the sample.**

A heterogeneous sample of nursing staff was sought in order to capture diversity and range of experience and thus create a wide reaching record of nurse views. Convenience sampling over social media, with interviews conducted over the phone were used to access nursing staff who worked in various trusts with a variety of patient groups. As shown in Table 4 this was a broadly successful strategy, with nurses, student nurses and support workers from a range of backgrounds volunteering from seven regions across the UK who worked on a broad range of units in mental health care. There was an even distribution of overall opinion on whether long or short shifts were preferable. Nursing staff were not screened for their opinion on long shifts prior to interview, so this even distribution was fortuitous, and may go some way to explain why saturation was met at the relatively low 15 (+2) participants.

It was decided to interview nursing staff with past as well as present experience of working long shifts. This was a helpful approach as the majority of nursing staff who preferred short shifts had past and not present experience of working long shifts. These voices would have been missed had only nursing staff with current experience been interviewed.

**Limitations of the sample.**

When examining the demographics of participants within typological group there was an uneven distribution; for example there were no nursing staff between 35-54 in the 'preference for short shifts' group. It is possible that this is indicative of a broader pattern across nursing experience, however as a non-representative convenience-based sample it is more likely that this pattern is arbitrary. Evidence for the latter hypothesis is in Todd, Robinson & Reid (1993), whose much larger sample of 320 nurses found older nurses disliked long shifts more than younger nurses.

Despite a targeted approach only one BAME nurse was recruited for this study. Adverts for BAME volunteers were published on Twitter, Facebook and Unite Mental Health Nurses Association newsletter. These adverts may have been more successful if the researcher had approached BAME nursing forums within

these settings. Furthermore, while there was a range of ages and locations the majority of participants were between 25- 34 and from Yorkshire. As framework analysis seeks a range of views the only real problem with potential overrepresentation of a group is that the researcher hears repeated accounts that do not add to their analysis, taking up time but not overtly altering the findings. Underrepresentation is more problematic, as it may mean that experiences held by particular groups are not heard.

**Limitation of interview.**

During interviews the researcher specified that long shifts considered were day shifts and not night shifts. Participants therefore rarely mentioned their experience of night shifts. This specification was made in order to keep the focus of the interview clear, and was helpful for this reason. However it meant that a potentially instructive element of the impact of working long shifts was not explored. In their scoping review Dall'ora et al. (2016) found evidence for disrupted performance when nurses worked a mixture of day and night shifts.

**Limitation of analysis.**

The typology chosen for analysis was based on nurse stated preference. Alternative typologies may have shed a different light on findings. For example, whether the participant was a registered nurse, student nurse or support worker was held in mind throughout analysis, however had this characteristic been specifically honed in on as a typology it is possible that more factors relating to role would have emerged. In studies such as this the researcher must make a decision about the lens through which data is explored: here typology based on stated preference was deemed to be the typology most meaningful to participants and suited to the research aim of exploring the impact of long shifts for nursing staff.

A further limitation was that participants were not consulted post initial analysis of data. This practice, sometimes termed 'respondent validation' is a technique used to explore the credibility of results, with participant feedback used to hone results further (Birt, Scott, Cavers, Cambell & Walter, 2016).

## Implications for Future Research

An aim of this study was to explore factors which nursing staff think alter the impact of long shifts on wellbeing and patient care. This study successfully

identified multiple factors. Relating to job demand these were: level of risk in the patient group, depth of emotional labour, time pressure between shifts and team conflict. Factors relating to job control were: ability to take breaks, quality of breaks, length of handover, skill mix and familiarity with shift pattern. Social support through relational and practical team support was also found to be of influence. Now that these factors have been identified quantitative research could be carried out to measure the influence that these factors have.

The account of nursing staff aligned with the buffer hypothesis of the JDCS Model (please see figure 5). Nursing staff described that high levels of demand were moderated, or buffered by improvement in factors relating to job control (like more than one nurse on shift) or a being part of a healthy team. An alternative understanding of how factors interrelate in the JDCS is the "strain hypothesis". This is that job control and social support are forms of strain, and that improvement in work related fatigue is therefore due to a reduction in strain, rather than a buffering of job demand. While nursing staff account aligned with the buffer hypothesis, research into these two hypotheses finds conflicting results (Van der Doef & Maes, 1999). Future research may also explore whether the buffer hypothesis is an accurate theory of how factors interrelate when working long shifts in mental health care.

Being able to access good quality breaks when working long shifts was reported to moderate fatigue. In this study good quality breaks were described as taking one longer break rather than two short breaks, being able to leave the unit and not being disturbed with work related activities. Future research could explore the characteristics of good quality breaks. Furthermore the culture of teams was reported to have a large impact on the ability to take breaks. The RCN (2018) have taken action to improve break culture in nursing teams with their 'Rest, Rehydrate, Refuel' initiative. It would be informative to monitor the impact of such campaigns to further inform how to support teams to develop a healthy break taking culture.

The negative impact of fatigue on interactions with patients and vigilance reported in this study is a cause of concern. Future research into the impact of fatigue on risk when working long shifts in mental health care would further inform the use of this shift pattern. For example research could be carried out that measured the prevalence of incidents in relation to shift length on mental health units; or observational research of nurse vigilance during one to one observations.

**Implications for Practice**

Working long shifts in mental health settings increased job demand and therefore fatigue. This was due to emotional demand over a prolonged period and was particularly the case on units with high levels of risk. Fatigue negatively affected nursing staff interaction with colleagues and patients. Reportedly it also reduced vigilance during times of risk. This finding warrants further research as it has implications for safety management on inpatient mental health units.

The following are recommendations that may be put into place by Trust that make use of long shifts, these recommendations aim to moderate the increased job demand of long shifts by increasing job control and social support:

- Losing crossover of staff is the financial driver for long shifts. It is important to acknowledge that losing crossover sacrifices flexible time that is used to catch up with tasks, spend time with patients and attend supervision, team meetings and training. Mental health nursing staff in this study particularly noted using crossover to facilitate therapeutic activities with patients. Therefore units that use long shifts are advised to consider ways in which this valuable flexible time may be created in the absence of daily crossovers. This may include regularly scheduling shifts with nursing staff outside of the numbers. This would increase staffing cost, but could improve the wellbeing of staff and patients
- Units that use long shifts are advised to prioritise time for thorough handovers. On some units handovers were as short as 15 minutes; nursing staff reported that this negatively affected the therapeutic relationship as well as reducing job satisfaction due to feeling professionally and personally embarrassed for being ill informed.
- Shift patterns that include single days off should be avoided. Nursing staff stated that a single day off was insufficient for recovery when working long shifts.
- The team culture around breaks strongly influenced whether they were taken and their quality. This is a particularly important issue in mental health settings where breaks are commonly missed. As good quality breaks moderated the impact of fatigue, interventions such as “Rest, Rehydrate,

Refuel" (RCN, 2018) are timely. Where possible, access to longer breaks that are less likely to be lost in the shift is advisable. Also where possible, encouraging nursing staff to leave the unit during the break may increase its effectiveness.

- When there was only one nurse on shift this was found to reduce job satisfaction. Additionally job satisfaction was reported to reduce when there was a high proportion of bank staff or unavailable MDT. At these times job demand became burdensome for nursing staff and magnified the potential for fatigue. As a minimum, two registered nurses per shift would moderate the burden of work and the impact of fatigue.
- Nursing staff with fixed shift patterns spoke very positively of working a predictable schedule. In addition to the benefits of a familiar routine, fixed shifts may reduce the amount of single days off and help nursing staff to plan ahead. Furthermore fixed shifts were reported to create cohesive teams, although these had the potential to feel exclusive to new members of staff. Therefore units using long shifts should consider a fixed rota, with particular attention to teams remaining open to newcomers.
- Strong team support was reported to help reduce the impact of fatigue. Group supervision, by a sensitive and qualified practitioner, may help build cohesion within teams that work long shifts (Francke & de Graaff, 2012).

**Conclusion**

This research explored nursing staff experiences of working long shifts in mental health settings and the factors nursing staff felt influenced their well being and patient care. The focus on the mental health setting was a unique contribution to research into long shifts. The qualitative method was used to complement quantitative studies by constructing a cohesive understanding of how nursing staff experience and balance the factors that make up and surround working long shifts. Framework analysis of 17 interviews with members of nursing staff recruited through social media were carried out. From this five categories emerged. These focussed on:

- The positive impact of being present on the unit for longer period of time, and the negative impact of being absent for multiple days, both on work management and continuity of relationships with patients.
- The negative impact of fatigue on nursing staff experience, their interactions with others and safety.
- The moderating effect of good quality breaks and the barriers to this, including limited time, team culture and individual responsibility.
- The strong influence that team interaction had on experience of working long shifts, both positive and negative.
- The allure of additional days off.

Previous studies have suggested that the benefit of additional days off led nursing staff to overlook a reduction in job satisfaction when on shift. There was evidence to support this, with participants commenting that days off make long shifts worthwhile. However, in a mental health setting the solidarity of being alongside patients from the beginning until the end of the day was a particular benefit to working long shifts, which may also increase job satisfaction.

Overall, nurse reports of increased fatigue when working long shifts, and the effects of fatigue, including poorer interactions with others and reduced vigilance mean that use of long shifts on inpatient mental health units requires careful consideration. Factors such as patient group, fixed or irregular shift pattern, staff mix, length of hand over, quality of breaks, and team cohesiveness all influenced nurse experience of working long shifts. These factors may be helpfully understood within the Job-Demand-Control- Support Model, with increased job control and social support buffering the impact of long shift job demands. It has been proposed that recommendations arising from this research be used to create standards for Trusts that make use of long shifts to strengthen the variables that buffer long shift related fatigue.

## References

Aborg, C. (2008). *IT, stress and occupational health* [Online Lecture]: IT, Stress and Occupational Health. Retrieved from http://www.it.uu.se/edu/course/homepage/hcinet/vt08p4/lectures/lecture7

Aiken, L. H., Sloane, D., Griffiths, P., Rafferty, A. M., Bruyneel, L., McHugh, M., … Sermeus, W. (2017). Nursing skill mix in European hospitals: Cross-sectional study of the association with mortality, patient ratings, and quality of care. *BMJ Qual Saf*, *26*(7), 559–568.

Archibald, M., & Munce, S. (2015). Challenges and strategies in the recruitment of participants for qualitative research. *University of Alberta Health Sciences Journal*, *11*, 34–37.

Armitage, A. (2007). Mutual research designs: Redefining mixed methods research design. British Educational Research Association Annual Conference, University of London, September 2007 Retrieved from http://www.leeds.ac.uk/educol/documents/167799.htm

Aslam, S. (2018). Twitter by the numbers: Stats, demographics & fun facts. Retrieved from https://www.omnicoreagency.com/twitter-statistics/

Badolamenti, S., Sili, A., Caruso, R., & FidaFida, R. (2017). What do we know about emotional labour in nursing? A narrative review. *British Journal of Nursing*, *26*(1), 48–55.

Bae, S.-H., & Fabry, D. (2014). Assessing the relationships between nurse work hours/overtime and nurse and patient outcomes: systematic literature review. *Nursing Outlook*, *62*(2), 138–156.

Ball, J., Maben, J., Murrells, T., Day, T., & Griffiths, P. (2014). 12-hour shifts: Prevalence, views and impact. National Nursing Research Unit, King's College London.

Barker, L. M., & Nussbaum, M. A. (2011). Fatigue, performance and the work environment: A survey of registered nurses. *Journal of Advanced Nursing*, *67*(6), 1370–1382.

Basner, M., Fomberstein, K., Razavi, F., Banks, S., William, J., Rosa, R., & Dinges, D. (2007). American time use survey: Sleep time and its relationship to waking activities. *Sleep*, *30*(9), 1085–1095.

Berg, B., & Lune, H. (2012). *Qualitative research for Social Sciences* (8th ed.). Boston, MA: Pearson.

Berger, P. L., & Luckmann, T. (1966). *The social construction of reality*. London: Penguin.

Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016) A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research, 26* (11), 1802-1811.

Bloodworth, C., Lea, A., Lane, S., & Ginn, R. (2001). Challenging the myth of the 12-hour shift: A pilot evaluation. *Nursing Standard*, *15*(29), 33.

Boivin, D. B., & Boudreau, P. (2014). Impacts of shift work on sleep and circadian rhythms. *Pathologie-Biologie*, *62*(5), 292–301.

Bridgman, P. W., & Physicien, E.. (1927). *The logic of modern physics (Vol. 3)*. New York. Macmillian.

Brown, K. M. (2007). Reconciling moral and legal collective entitlement: Implications for community-based land reform. *Land Use Policy*, *24*(4), 633–643.

Bryman, A. (2012). *Social research methods* (4 edition). Oxford ; New York: OUP Oxford.

Cachia, M., & Millward, L. (2011). The telephone medium and semi-structured interviews: A complementary fit. *Qualitative Research in Organizations and Management: An International Journal*, *6*(3), 265–277.

Chen, J., Davis, K., Daraiseh, N., Pan, W., & Davis, L. S. (2014). Fatigue and recovery in 12-hour dayshift hospital nurses. *Journal of Nursing Management*, *22*(5), 593–603.

Chen, J., Davis, L., Davis, K., Pan, W., & Daraiseh, N. (2011). Physiological and behavioural response patterns at work among hospital nurses. *Journal of Nursing Management*, *19*(1), 57–68.

Cherryholmes, C. (1992). Notes on pragmatism and scientific realism. *Educational Researcher*, *21*(6), 13–17.

Christmas, D., & Sweeney, A. (2016). Service user, patient, survivor or client … has the time come to return to 'patient'? *The British Journal of Psychiatry*, *209*(1), 9–13.

Chudleigh, J., Fletcher, M., & Gould, D. (2005). Infection control in neonatal intensive care units. *Journal of Hospital Infection*, *61*(2), 123–129.

Clark, A. (1998). The qualitative-quantitative debate: Moving from positivism and confrontation to post-positivism and reconciliation. *Journal of Advanced Nursing*, *27*(6), 1242–1249.

Collette, J. (2004). Retention of nursing staff - a team-based approach. *Australian Health Review; Collingwood*, *28*(3), 349–356.

Corden, A., Sainsbury, R. (2006). *Using verbatim quotations in reporting qualitative social research: researchers' views*. Social Policy Research Unit: University of York.

Cormack, D. (2000). *The Research Process in Nursing*. Oxford: Blackwell Science Ltd.

Cowden, S., & Singh, G. (2007). The 'User': Friend, foe or fetish?: A critical exploration of user involvement in health and social care. *Critical Social Policy*, *27*(1), 5–23.

Creswell, J. (1998). *Qualitative inquiry and research design: Choosing among five traditions.* Thousand Oaks, CA, US: Sage Publications.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA, US: Sage publications.

Crew, S. (2006). A qualitative study on effects of working unsocial hours. *Journal of Advanced Nursing*, *18*, 932–937.

Cunningham, L., Kennedy, J., Nwolisa, F., Callard, L., & Wike, C. (2012). *Patients not paperwork: Bureaucracy affecting nurses in the NHS*. NHS Insititute for Innovation and Improvement. Retrieved from https://www.qualitasconsortium.com/index.cfm/reference-material/fundamentals/patients-not-paperwork/

Dall'Ora, C., & Griffiths, P. (2017). Nursing shift work in hospitals: What are the effects on patient and employee outcomes? *Health Work Evidence Briefs: University of Southamption*, *2*.

Dall'Ora, C., Griffiths, P., & Ball, J. (2015). 12 hour shifts: Nurse burnout, job satisfaction and intention to leave the job. *Evidence Brief, CLAHRC Wessex*, (3).

Dall'ora, C., Griffiths, P., Ball, J., & Recio Saucedo, A. (2016). Characteristics of shift work and their impact on employee performance and wellbeing: a literature review. *International Journal of Nursing Studies*, *58*, 12–27.

Dall'Ora, C., Griffiths, P., Ball, J., Simon, M., & Aiken, L. H. (2015). Association of 12 h shifts and nurses' job satisfaction, burnout and intention to leave: Findings from a cross-sectional study of 12 European countries. *BMJ Open*, *5*(9).

Darlington, Y., & Scott, D. (2002). *Qualitative research in practice: Stories from the field*. Buckingham: Open University Press.

Denzin, N. (2010). Moments, mixed methods, and paradigm dialogs. *Qualitative Inquiry*, *16*(6), 419–427.

Dorrian, J. (2012). Alcoholism: The self-reinforcing feedback. In *Psychology - Selected Papers*. Retrieved from /books/psychology-selected-papers/alcoholism-the-self-reinforcing-feedback-loop

Dorrian, J., Heath, G., Sargent, C., Banks, S., & Coates, A. (2017). Alcohol use in shiftworkers. *Accident Analysis & Prevention*, *99*, 395–400.

Dwyer, T., Jamieson, L., Moxham, L., Austen, D., & Smith, K. (2007). Evaluation of the 12-hour Shift trial in a regional intensive care unit. *Journal of Nursing Management*, *15*(7), 711–720.

Dziopa, F., & Ahern, K. J. (2009). What makes a quality therapeutic relationship in psychiatric/mental health nursing: A review of the research literature. *Internet Journal of Advanced Nursing Practice*, *10*(1), 7–7.

Elliott, R., Fischer, C. T., & Rennie, D. L. (1999). Evolving guidelines for publication of qualitative research studies in psychology and related fields. *British Journal of Clinical Psychology*, *38*(3), 215–229.

Elliott, R., Fischer, C., & Rennie, D. (2000). Also against methodolatry: A reply to Reicher. *British Journal of Clinical Psychology*, *39*(1), 7–10.

Farooq, M., & Villiers, C. (2017). Telephonic qualitative research interviews: When to consider them and how to do them. *Meditari Accountancy Research*, *25*(2), 291–316.

Fenig, S., Levav, I., Kohn, R., & Yelin, N. (1993). Telephone vs face-to-face interviewing in a community psychiatric survey. *American Journal of Public Health*, *83*(6), 896–898.

Fern, E. F. (1982). The use of focus groups for idea generation: The effects of group size, acquaintanceship, and moderator on response quantity and quality. *Journal of Marketing Research*, *19*(1), 1–13.

Fitzpatrick, J., While, A., & Roberts, J. (1999). Shift work and its impact upon nurse performance: Current knowledge and research issues. *Journal of Advanced Nursing*, *29*(1), 18–27.

Flick, U. (2014). *An introduction to qualitative research*. London. Sage.

Flinders, D. J. (1997). *InterViews: An introduction to qualitative research interviewing.* Thousand Oaks, CA: Sage Publications.

Flo, E., Pallesen, S., Moen, B., Waage, S., & Bjorvatn, B. (2014). Short rest periods between work shifts predict sleep and health problems in nurses at 1-year follow-up. *Occup Environ Med*, *71*(8), 555–561.

Flynn, H. (2016). Nine in ten healthcare staff experience workplace stress. *Primary Health Care. 26*(7), 6-6

Forchuk, C., & Reynolds, W. (2001). Clients' reflections on relationships with nurses: Comparisons from Canada and Scotland. *Journal of Psychiatric and Mental Health Nursing*, *8*(1), 45–51.

Forchuk, C., Westwell, J., Martin, M.-L., Bamber-Azzapardi, W., Kosterewa-Tolman, D., & Hux, M. (2000). The developing nurse-client relationship:

Nurses' perspectives. *Journal of the American Psychiatric Nurses Association*, *6*(1), 3–10.

Francis, J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M., & Grimshaw, J. (2010). What is an adequate sample size? Operationalising data saturation for theory-based interview studies. *Psychology & Health*, *25*(10), 1229–1245.

Francke, A., & de Graaff, F. (2012). The effects of group supervision of nurses: A systematic literature review. *International Journal of Nursing Studies*, *49*(9), 1165–1179.

Gage, N. (1989). The paradigm wars and their aftermath a "historical" sketch of research on teaching since 1989. *Educational Researcher*, *18*(7), 4–10.

Geiger-Brown, J., Rogers, V., Trinkoff, A., Kane, R., Bausell, R., & Scharf, S. (2012). Sleep, sleepiness, fatigue, and performance of 12-hour-shift nurses. *Chronobiology International*, *29*(2), 211–219.

Gillespie, A., & Curzio, J. (1996). A comparison of a 12-hour and eight-hour shift system. *Nursing Times*, *92*(39), 36–39.

Glaser, B. G. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory*. Mill Valley, California: Sociology Press.

Goldkuhl, G. (2012). Pragmatism vs interpretivism in qualitative information systems research. *European Journal of Information Systems*, *21*(2), 135–146.

Greenwood, G. (2017, September 22). Mental health staff long-term stress leave up 22%. *BBC News*. Retrieved from https://www.bbc.co.uk/news/health-41172805.

Griffiths, P., Dall'Ora, C., Simon, M., Ball, J., Lindqvist, R., Rafferty, A.-M., … Aiken, L. (2014). Nurses' shift length and overtime working in 12 European

countries: The association with perceived quality of care and patient safety. *Medical Care*, *52*(11), 975-981.

Gubrium, J. (2018). Curbing Self-Referential Writing [University of Durham]. Retrieved from https://bit.ly/2NiWH3Z

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough?: An experiment with data saturation and variability. *Field Methods*, *18*(1), 59–82.

Guest, G., Namey, E., Taylor, J., Eley, N., & McKenna, K. (2017). Comparing focus groups and individual interviews: Findings from a randomized study. *International Journal of Social Research Methodology*, *20*(6), 693–708.

Gul, R., & Ali, P. (2010). Clinical trials: The challenge of recruitment and retention of participants. *Journal of Clinical Nursing*, *19*(1–2), 227–233.

Harper, D., & Thompson, A. (2011). *Qualitative research methods in mental health and psychotherapy: A guide for students and practitioners*. John Wiley & Sons.

Harris, R., Sims, S., Parr, J., & Davies, N. (2015). Impact of 12 h shift patterns in nursing: A scoping review. *International Journal of Nursing Studies*, *52*(2), 605–634.

Heary, C., & Hennessy, E. (2006). Focus groups versus individual interviews with children: A comparison of data. *The Irish Journal of Psychology*, *27*(1–2), 58–68.

Hochschild, A. (1983). The managed heart: Commercialization of human feeling. Berkeley: University of California Press.

Holbrook, A., Green, M., & Krosnick, J. (2003). Telephone versus face-to-face interviewing of national probability samples with long questionnaires: Comparisons of respondent satisficing and social desirability.*' Public Opinion Quarterly 67*.

Holzemer, W. L. (2009). *Improving health through nursing research*. John Wiley & Sons.

Ince, B., Cuijpers, P., van't Hof, E., & Riper, H. (2014). Reaching and recruiting Turkish migrants for a clinical trial through Facebook: A process evaluation. *Internet Interventions*, *1*(2), 74–83.

Iskra-Golec, I., Folkard, S., Marek, T., & Noworol, C. (1996). Health, well-being and burnout of ICU nurses on 12- and 8-h shifts. *Work & Stress*, *10*(3), 251–256.

Jacob, E., McKenna, L., & D'Amore, A. (2013). The changing skill mix in nursing: Considerations for and against different levels of nurse. *Journal of Nursing Management*, *23*(4), 421–426.

Johansson, H., & Eklund, M. (2003). Patients' opinion on what constitutes good psychiatric care. *Scandinavian Journal of Caring Sciences*, *17*(4), 339–346.

Johnson, J., & Hall, E. (1988). Job strain, work place social support, and cardiovascular disease: A cross-sectional study of a random sample of the Swedish working population. *American Journal of Public Health*, *78*(10), 1336–1342.

Kalisch, B., Lee, H., & Rochman, M. (2010). Nursing staff teamwork and job satisfaction. *Journal of Nursing Management*, *18*(8), 938–947.

Karasek, R. (1998). Demand/Control model: A social-emotional, and psychological approach to stress risk and active behavior development. In *ILO encyclopedia of occupational health and safety*. Geneva: International Labor Office

Karasek, R. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, *24*(2), 285–308.

Kayrouz, R., Dear, B., Karin, E., & Titov, N. (2016). Facebook as an effective recruitment strategy for mental health research of hard to reach populations. *Internet Interventions*, *4*, 1–10.

Knodel, J. (1993). The design and analysis of focus group studies: A practical approach. In D. Morgan, *Successful Focus Groups: Advancing the State of the Art* (pp. 35–50). Thousand Oaks, California: SAGE Publications.

Krueger, R. (2014). *Focus Groups: A Practical Guide for Applied Research*. Thousand Oaks, California: SAGE Publications.

Kundi, M., Koller, M., Stefan, H., Lehner, L., Kaindlsdorfer, S., & Rottenbücher, S. (1995). Attitudes of nurses towards 8-h and 12-h shift systems. *Work & Stress*, *9*(2–3), 134–139.

Lea, A., & Bloodworth, C. (2003). Modernising the 12-hour shift. *Nursing Standard*, *17*(19), 33–36.

Lim, J., & Dinges, D. (2008). Sleep deprivation and vigilant attention. *Annals of the New York Academy of Sciences*, *1129*(1), 305–322.

Lorenz, S. (2008). 12-hour shifts: An ethical dilemma for the nurse executive. *Journal of Nursing Administration*, *38*(6), 297–301.

Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. *Forum: Qualitative Social Research*, *11*(3).

McGettrick, K., & O'Neill, M. (2006). Critical care nurses--perceptions of 12-h shifts. *Nursing in Critical Care*, *11*(4), 188–197.

McGuire, R., McCabe, R., & Priebe, S. (2001). Theoretical frameworks for understanding and investigating the therapeutic relationship in psychiatry. *Social Psychiatry and Psychiatric Epidemiology*, *36*(11), 557–564.

McLellan, E., MacQueen, K., & Neidig, J. (2003). Beyond the qualitative interview: Data preparation and transcription. *Field Methods*, *15*(1), 63–84.

Morgan, D. (2014). Pragmatism as a paradigm for social research. *Qualitative Inquiry*, *20*, 1045– 1053.

Morse, J., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, *1*(2), 13–22.

Murray, R. (2017). *Falling number of nurses in the NHS paints a worrying picture.* Kings Fund. Retrieved from https://www.kingsfund.org.uk/blog/2017/10/falling-number-nurses-nhs-paints-worrying-picture

Neuberger, J. (1999). Do we need a new word for patients? *BMJ : British Medical Journal*, *318*(7200), 1756–1758.

NHS Evidence. (2010). *Moving to 12-hour shift patterns: To increase continuity and reduce costs*. Retrieved from goo.gl/HZ35D7

Northouse, L., Rosset, T., Phillips, L., Mood, D., Schafenacker, A., & Kershaw, T. (2006). Research with families facing cancer: The challenges of accrual and retention. *Research in Nursing & Health*, *29*(3), 199–211.

O'Connor, A., Jackson, L., Goldsmith, L., & Skirton, H. (2014). Can I get a retweet please? Health research recruitment and the Twittersphere. *Journal of Advanced Nursing*, *70*(3), 599–609.

Oltmann, S. (2016). Qualitative interviews: A methodological discussion of the interviewer and respondent contexts. *Forum: Qualitative Social Research*, *17*(2).

Opdenakker, R. (2006). Advantages and disadvantages of four interview techniques in qualitative research. *Forum: Qualitative Social Research*, *7*(4).

Parkinson, S., Eatough, V., Holmes, J., Stapley, E., & Midgley, N. (2016). Framework analysis: A worked example of a study exploring young people's

experiences of depression. *Qualitative Research in Psychology*, *13*(2), 109–129.

Peacock, B., Glube, R., Miller, M., & Clune, P. (1983). Police officers' responses to 8 and 12 hour shift schedules. *Ergonomics*, *26*(5), 479–493.

Popper, K. (1963). *Conjectures and refutations: The growth of scientific knowledge*. London ; New York: Routledge.

Ranney, M., Meisel, Z., Choo, E., Garro, A., Sasson, C., & Morrow, K. (2015). Interview-based qualitative research in emergency care part II: Data collection, analysis and results reporting. *Academic Emergency Medicine : Official Journal of the Society for Academic Emergency Medicine*, *22*(9), 1103–1112.

Rat, A., Pouchot, J., Guillemin, F., Baumann, M., Retel-Rude, N., Spitz, E., & Coste, J. (2007). Content of quality-of-life instruments is affected by item-generation methods. *International Journal for Quality in Health Care*, *19*(6), 390–398.

RCN. (2017). *Royal College of Nursing employment survey 2017.* Retrieved from http://www.employment-studies.co.uk/resource/royal-college-nursing-employment-survey-2017

RCN. (2018). *Rest, rehydrate, refuel. Resource for RCN members.* Retrieved from https://www.rcn.org.uk/professional-development/publications/pub-006703

Reid, N., Robinson, G., & Todd, C. (1993). The quantity of nursing care on wards working 8- and 12-hour shifts. *International Journal of Nursing Studies*, *30*(5), 403–413.

Reid, N., Robinson, G., & Todd, C. (1994). The 12-hour shift: the views of nurse educators and students. *Journal of Advanced Nursing*, *19*(5), 938–946.

Reid, N., Todd, C., & Robinson, G. (1991). Educational activities on wards under 12 hour shifts. *International Journal of Nursing Studies*, *28*(1), 47–54.

Rhéaume, A., & Mullen, J. (2017). The impact of long work hours and shift work on cognitive errors in nurses. *Journal of Nursing Management*, *26*(1), 26–32.

Richardson, A., Dabner, N., & Curtis, S. (2003). Twelve-hour shift on ITU: A nursing evaluation. *Nursing in Critical Care*, *8*(3), 103–108.

Richardson, A., Turnock, C., Harris, L., Finley, A., & Carson, S. (2007). A study examining the impact of 12-hour shifts on critical care staff. *Journal of Nursing Management*, *15*(8), 838–846.

Ritchie, J., Lewis, J., Nicholls, C., & Ormston, R. (2013). *Qualitative research practice: A guide for social science students and researchers*. Los Angelis, California: SAGE.

Ritchie, J., Spencer, L., Bryman, A., & Burgess, R. (1994). *Analysing qualitative data*. London: Routledge.

Robinson, O. (2013). Sampling in interview-based qualitative research: A theoretical and practical guide. *Qualitative Research in Psychology. 11* (1), 25-41.

Roehrs, T., & Roth, T. (2001). Sleep, sleepiness, and alcohol use. *Alcohol Research and Health*, *25*(2), 101–109.

Rogers, A., Hwang, W., Scott, L., Aiken, L., & Dinges, D. (2004). The working hours of hospital staff nurses and patient safety. *Health Affairs*, *23*(4), 202–212.

Rogers, C. R. (1959). *A theory of therapy, personality, and interpersonal relationships: As developed in the client-centered framework*. New York: McGraw-Hill.

Sandelowski, M. (2000). Focus on research methods-whatever happened to qualitative description? *Research in Nursing and Health*, *23*(4), 334–340.

Sarre, S., Maben, J., Aldus, C., Schneider, J., Wharrad, H., Nicholson, C., & Arthur, A. (2018). The challenges of training, support and assessment of healthcare support workers: A qulitative study of experiences in three English acute hospitals. *International Journal of Nursing Studies, 79,* 145-153.

Scott, L., Hwang, W., Rogers, A., Nysse, T., Dean, G., & Dinges, D. (2007). The relationship between nurse work schedules, sleep duration, and drowsy driving. *Sleep*, *30*(12), 1801–1807.

Seale, C. (2000). Using computers to analyse qualitative data. *Doing Qualitative Research: A Practical Handbook*, 155–174.

Sermeus, W., Aiken, L. H., Van den Heede, K., Rafferty, A., Griffiths, P., Moreno-Casbas, M., … Bruyneel, L. (2011). Nurse forecasting in Europe (RN4CAST): rationale, design and methodology. *BMC Nursing*, *10*(1), 6.

Sethi, F., Parkes, J., Baskind, E., Paterson, B., & O'Brien, A. (2018). Restraint in mental health settings: Is it time to declare a position? *The British Journal of Psychiatry*, *212*(3), 137–141.

Simmons, P., Hawley, C., Gale, T., & Sivakumaran, T. (2010). Service user, patient, client, user or survivor: Describing recipients of mental health services. *The Psychiatrist*, *34*(1), 20–23.

Smith, J., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research*. Los Angeles: SAGE

Smith, J., Bekker, H., & Cheater, F. (2011). Theoretical versus pragmatic design in qualitative research. *Nurse Researcher*, *18*(2), 39–51.

Sprinks, J. (2012). Trust says shorter shifts will give nurses more time at the bedside. *Nursing Standard*, *27*(7).

Srivastava, A., & Thomson, S. (2009). *Framework Analysis: A Qualitative Methodology for Applied Policy Research*. Rochester, NY: Social Science Research Network.

Stimpfel, A, & Aiken, L. (2013). Hospital staff nurses' shift length associated with safety and quality of care. *Journal of Nursing Care Quality*, *28*(2), 122.

Stimpfel, A., Sloane, D., & Aiken, L. (2012). The longer the shifts for hospital nurses, the higher the levels of burnout and patient dissatisfaction. *Health Affairs*, *31*(11), 2501–2509.

Strauss A. L., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory.* Sage, London.

Szameitat, A. J., Hamaida, Y., Tulley, R. S., Saylik, R., & Otermans, P. C. J. (2015). "Women Are better than men"–Public beliefs on gender differences and other aspects in multitasking. *PLOS ONE*, *10*(10), e0140371.

Szczurak, T., Kamińska, B., & Szpak, A. (2007). Estimation of the psychological load in the performance of nurses' work based on subjective fatigue symptoms. *Advances in Medical Sciences*, *52* (1), 102–104.

Taylor, C., Graham, J., Potts, H., & Candy, J. (2007). Impact of hospital consultant's poor mental health on patient care. *The British Journal of Psychiatry, 190* (3), 268-269.

Tesch, R. (2013). *Qualitative research: Analysis types and software*. Routledge.

Thompson, B. J., Stock, M. S., & Banuelas, V. K. (2017). Effects of accumulating work shifts on performance-based fatigue using multiple strength measurements in day and night shift nurses and aides. *Human Factors*, *59*(3), 346–356.

Thomson, L., Schneider, J., & Hare Duke, L. (2017). Unregistered health care staff's perceptions of 12 hour shifts: An interview study. *Journal of Nursing Management*, *25*(7), 531–538.

Todd, C., Reid, N., & Robinson, G. (1989). The quality of nursing care on wards working eight and twelve hour shifts: a repeated measures study using the

MONITOR index of quality of care. *International Journal of Nursing Studies*, *26*(4), 359–368.

Todd, C., Reid, N., & Robinson, G. (1991). The impact of 12-hour nursing shifts. *Nursing Times*, *87*(31), 47–50.

Todd, C., Robinson, G., & Reid, N. (1993). 12-hour shifts: job satisfaction of nurses. *Journal of Nursing Management*, *1*(5), 215–220.

Torrey, E. (2011). Patients, clients, consumers, survivors et al: What's in a name? *Schizophrenia Bulletin*, *37*(3), 466–468.

Trinkoff, A. M., Johantgen, M., Storr, C. L., Gurses, A. P., Liang, Y., & Han, K. (2011). Nurses' work schedule characteristics, nurse staffing, and patient mortality. *Nursing Research*, *60*(1), 1–8.

Van der Doef, M., & Maes, S. (1999). The job demand-control (-support) model and psychological well-being: a review of 20 years of empirical research. *Work & Stress*, *13*(2), 87–114.

Van Vegchel, N., De Jonge, J., & Landsbergis, P. A. (2005). Occupational stress in (inter) action: The interplay between job demands and job resources. *Journal of Organizational Behavior*, *26*(5), 535–560.

Varcarolis, E. (2005). Developing therapeutic relationships. In *Foundations of Psychiatric Mental Health Nursing* (5th ed., p. 16). Philadelphia, United States: Elisevier.

Vogl, S. (2013). telephone versus face-to-face interviews: Mode effect on semistructured interviews with children. *Sociological Methodology*, *43*(1), 133–177.

Ward, L. (2011). Mental health nursing and stress: maintaining balance. *International Journal of Mental Health Nursing*, *20*(2), 77.

Watson, D. (1992). Correcting for acquiescent response bias in the absence of a balanced scale: An application to class consciousness. *Sociological Methods & Research*, *21*(1), 52–88.

Weitzman, E. (2000). Software and qualitative research. *Handbook of Qualitative Research*, *2*, 803–820.

White, C., Woodfield, K., Ritchie, J., & Ormston, R. (2014). Writing up Qualitative Research. In *Qualitatiev Reserach Practice* (2nd ed., pp. 367–400). London: Sage Publications Ltd.

Williams, M. (2016). *Key Concepts in the Philosophy of Social Research*. SAGE.

Wilstrand C., Lindgren B.-M., Gilje F., & Olofsson B. (2007). Being burdened and balancing boundaries: A qualitative study of nurses' experiences caring for patients who self-harm. *Journal of Psychiatric and Mental Health Nursing*, *14*(1), 72–78.

Winwood, P., Winefield, A., Dawson, D., & Lushington, K. (2005). Development and validation of a scale to measure work-related fatigue and recovery: The Occupational Fatigue Exhaustion/Recovery Scale (OFER). *Journal of Occupational and Environmental Medicine*, *47*(6), 594–606.

Winwood, P., Winefield, A., & Lushington, K. (2006). Work-related fatigue and recovery: The contribution of age, domestic responsibilities and shiftwork. *Journal of Advanced Nursing*, *56*(4), 438–449.

Yee Man Poon, C. (2014). Meeting the mental heath needs of older adults. *In A. Danquah & K. Berry, Attachment Theory in Adult Mental Health A Guide to Clinical Practice* (1st ed.). Oxon: Routledge.

# Appendices

## Appendix A: Information Sheet

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**Exploring how long days impact upon nurses working in mental health setting**

Thank you for considering being part of this study. Before you decide whether to consent to take part please read the information below outlining the reason for this research and what to expect.

**What is the purpose of the study?**

To explore the experiences of qualified and unqualified nurses who work long shifts in mental health settings.

**How is my experience relevant?**

As a nurse, support worker or health care assistant who has worked long shifts in an inpatient mental health setting you have a unique insight on its impact on your life and work. We hope to interview about 20 people to hear different experiences of working long shifts, and to find common themes and unique differences in these experiences. This information will help in understanding the impact of long shifts in mental health care.

**Do I have to take part?**

It is up to you whether you take part. If you decide to take part you will be taken through some statements on a consent form. During the interview you can chose not to answer individual questions. You can chose to end the interview at any time and may withdraw your data up until a month following the interview. You do not need to give any reason for withdrawing. If you chose to withdraw from the project then please contact the researcher (contact details below) within a month of the interview with your request. Your data will then be destroyed and not used in the project.

**What will happen if I take part?**

First you will contact the researcher to express interest in taking part in this research. Following this a convenient date and time for a phone interviewed will be arranged. This interview will be about your experiences working long shifts in a mental health inpatient setting. At the beginning of the phone call you will asked for consent to participate in the research. You will then be asked some basic information about yourself and your career in mental health care. The interview following this is expected to last about an hour. There will be opportunity at the end of the interview for you to ask any questions you may still have.

| *Project title* | *Document type* | *Version #* | *Date* |
|---|---|---|---|
| Experience of Long Days | Information Sheet | 4 | 16.06.17 |

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In order that our conversation can be transcribed for analysis it will be recorded. Anything disclosed during the phone call will be treated as confidential, and any identifiable information, like names and locations, will be changed to make sure this record of our conversation will not be linked to you.

**How will the recording be used?**

The recording will only be used for analysis. The audio files will be saved onto a secure, password protected server at the University of Leeds and deleted from the recording device immediately following this. Only members of the research team will have access to the audio files. The data you provide during the study will be securely stored for no longer than 5 years before being destroyed.

**Are there any possible risks or disadvantages to taking part?**

The questions will be about your experience of working long days. It is possible that these experiences bring up some difficult memories or feelings for you. If you find that this is particularly difficult then you discuss this with the interviewer at any point. You are also free to choose not to answer questions without needing to give a reason.

**Are there any benefits to taking part?**

By participating you will be helping to address a gap in knowledge about the impact of working long shifts in mental health. While this may not be of immediate benefit to you it is hoped that it will have a positive effect on organisational practice. You may also find this opportunity for structured personal reflection of interest. On request you will be emailed a certificate confirming your participation in research, this can be used as evidence in revalidation or appraisal portfolios.

**Will my identification in the study and the things I say be kept confidential?**

Yes, with exceptions. The exception to this would be if you share something that reveals that a person is at risk of harm, or has been harmed in such a way that would be reduced if we were to disclose the information you provided. In these cases we may be required to act on the information, but we would not do this without involving you in the process.

To maintain confidentiality you will be called from a private location and are encouraged to take the call in private also. The recoding of this phone call will be uploaded and stored securely on a password protected computer and permanently deleted from the recorder. When transcribing the recording, pseudonyms will be used. A file containing

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the link between your pseudonym and real name will be stored separately to all data, on a password-protected file on a secure server at the University of Leeds. Any member of the team involved in the analysis will have signed adherence to the NHS Confidentiality Code of Practice. Anonymous quotes from your interview might be used in the write up however these will not be identifiable.

**What will happen to the results of this study?**

Once all participants have taken part and all data has been collected and analysed, results will be written up for publication. It will also be included in a Doctoral thesis.

**Who is organising the research?**

The research is organised as part of a Doctoral project funded by the University of Leeds.

**Who has reviewed the study?**

This study was approved on the 12th June 2017 by the School of Psychology Ethics Committee (ref no: 17-0172)
It is Supervised by: Dr Judith Johnson, Clinical Psychologist. Address: School of Psychology; Faculty of Medicine and Health; Institute of Psychological sciences; University of Leeds; LS2 9JT. Telephone: 0113 3430510. Email: j.johnson@leeds.ac.uk.

**Who do I contact for further information?**

If you have any questions about the study please feel free to contact the primary researcher, Susanna Ward:

umsmw@leeds.ac.uk
@susanna_ward
mentalhealthlongdays

## Appendix B: Consent Statement

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Exploring how long days impact upon nurses working in mental health setting
Consent Statements

***After reading the Information Sheet*** *please take a moment to look through these ten statements of consent.*

*At the beginning of your interview you will be asked whether you agree with each of these statements.*

1. I have read and understand the information sheet dated 16th June 2017 explaining the research.
2. I have had the opportunity to ask questions about the research.
3. I understand that my participation is voluntary.
4. I am free to withdraw up until a month after being interviewed without needing to give any reason and without negative consequences. If I withdraw all record of my interview will be destroyed.
5. Should I not wish to answer any particular question I am free to decline.
6. I agree to my interview being recorded for analysis and that this recording it will be stored securely.
7. I give permission for members of the research team to have access to my recording.
8. I understand that my name will not be linked with the research materials, and I will not be identifiable in any reports that result from the research.
9. I agree to the storage of anonymised data for use in relevant future research
10. I agree to take part in this research.

| *Project title* | *Document type* | *Version #* | *Date* |
|---|---|---|---|
| Experience of Long days | Consent Statement | 3 | 16.06.17 |

**Appendix C: Participant Variables Form**

Introduction & Situating Sample

Introduction
- Leeds University- DClin Study
- Consent
- Confidentiality
- Timing

Situating Sample:

- Individual
  - Age
  - Ethnicity
  - Gender
  - Region
  - Care responsibilities for others (e.g. children, relatives)

- Role
  - Job role (& banding)
    Current
    Past
  - Client group
    Current
    Past

- Hours
  - Full/Part time
    Current
    Past
  - Shift pattern- long/short/mixed
    Current
    Past
  - Length of LS
  - How shifts are decided i.e.: rotating, requested

**Appendix D: Short Advert**

Advert for BAME volunteers ran in the Unite Mental Health Nurses Association newsletter October/November 2017 edition.

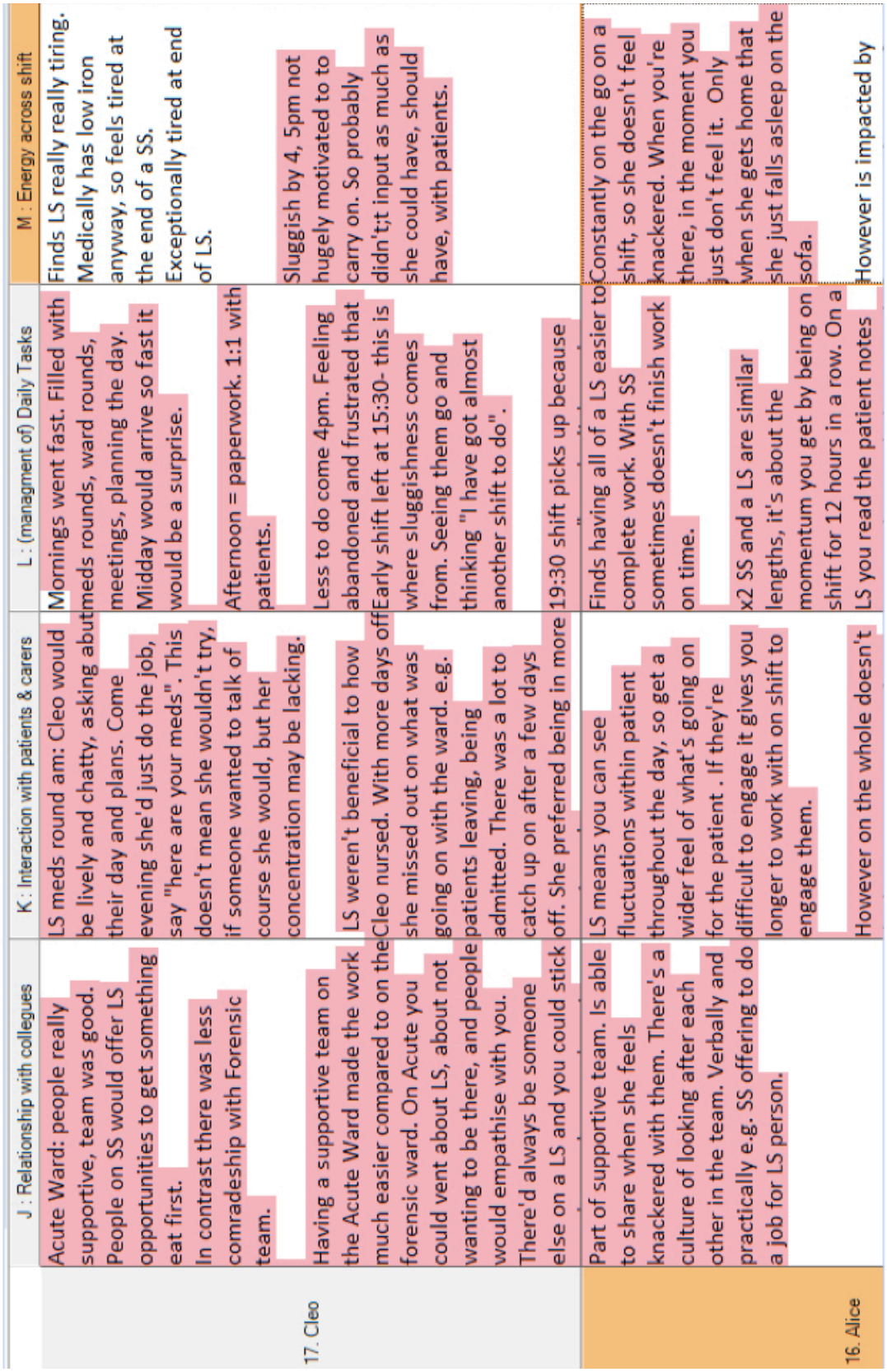
# BAME help needed for research project

A doctoral researcher at the University of Leeds is seeking black and minority ethnic mental health nurses to discuss their experiences of working long shifts on inpatient mental health units.

Susanna Ward is particularly interested to discuss issues such as staff wellbeing and the quality and continuity of patient care.

All discussions will be confidential and anonymised in the research report.

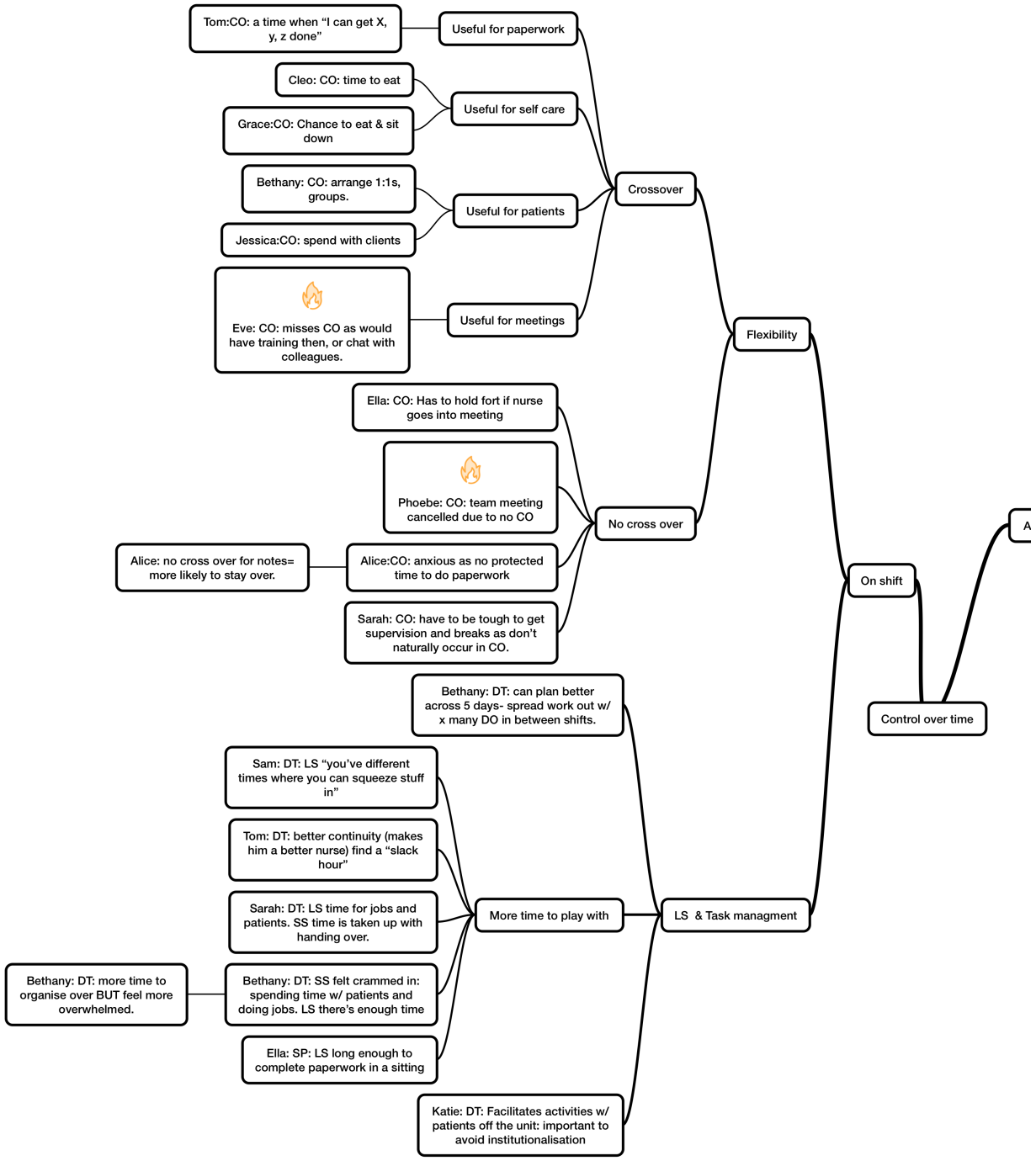
If you would like to help with the research, please contact umsmw@leeds.ac.uk.



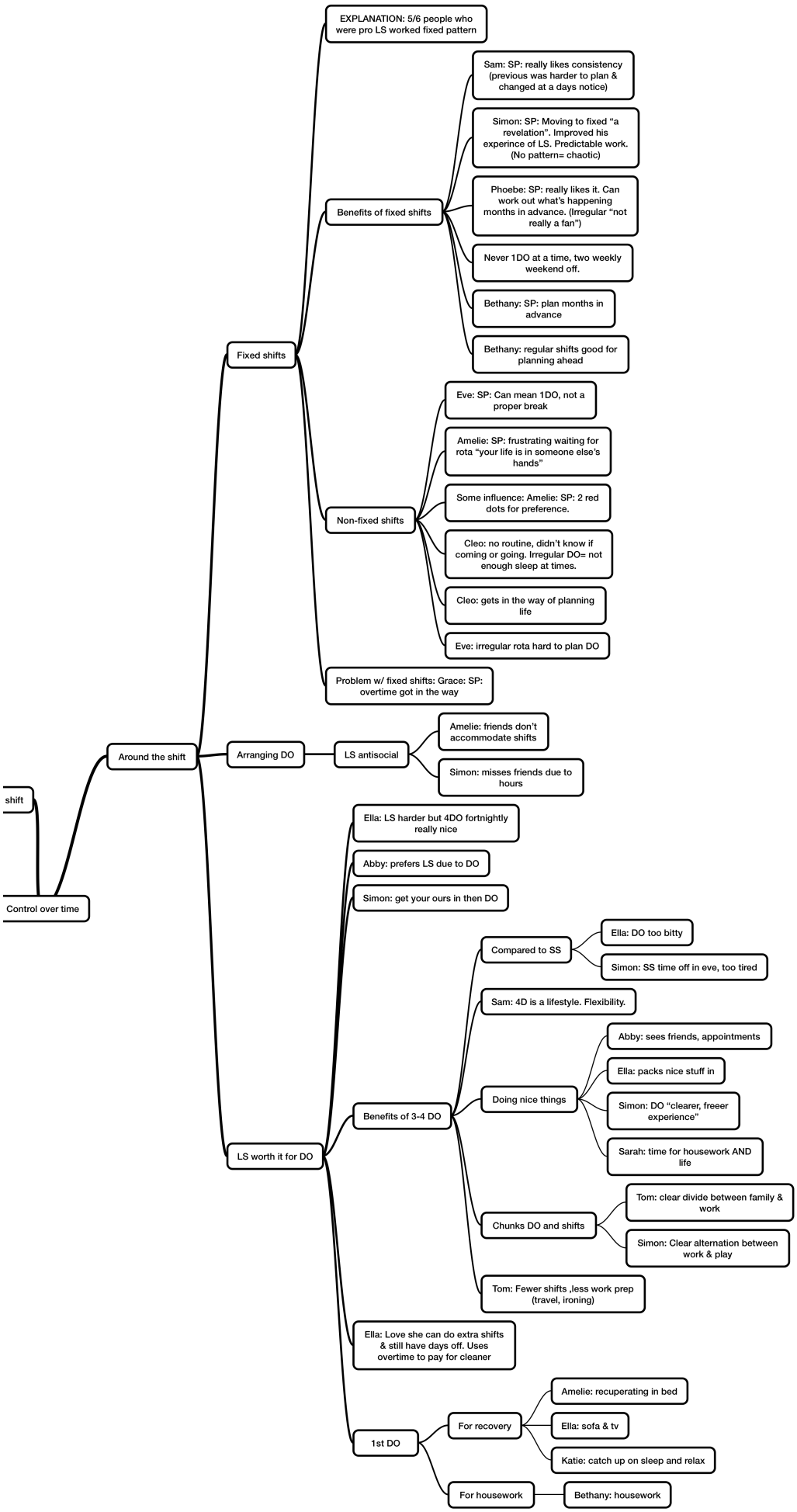
| | J : Relationship with collegues | K : Interaction with patients & carers | L : (managment of) Daily Tasks | M : Energy across shift |
|---|---|---|---|---|
| 17. Cleo | Acute Ward: people really supportive, team was good. People on SS would offer LS opportunities to get something eat first. In contrast there was less comradeship with Forensic team.<br>Having a supportive team on the Acute Ward made the work much easier compared to on the forensic ward. On Acute you could vent about LS, about not wanting to be there, and people would empathise with you. There'd always be someone else on a LS and you could stick | LS meds round am: Cleo would be lively and chatty, asking about their day and plans. Come evening she'd just do the job, say "here are your meds". This doesn't mean she wouldn't try, if someone wanted to talk of course she would, but her concentration may be lacking.<br>LS weren't beneficial to how Cleo nursed. With more days off she missed out on what was going on with the ward. e.g. patients leaving, being admitted. There was a lot to catch up on after a few days off. She preferred being in more | Mornings went fast. Filled with meds rounds, ward rounds, meetings, planning the day. Midday would arrive so fast it would be a surprise.<br>Afternoon = paperwork. 1:1 with patients.<br>Less to do come 4pm. Feeling abandoned and frustrated that Early shift left at 15:30- this is where sluggishness comes from. Seeing them go and thinking "I have got almost another shift to do".<br>19:30 shift picks up because | Finds LS really really tiring. Medically has low iron anyway, so feels tired at the end of a SS. Exceptionally tired at end of LS.<br>Sluggish by 4, 5pm not hugely motivated to to carry on. So probably didn't;t input as much as she could have, should have, with patients. |
| 16. Alice | Part of supportive team. Is able to share when she feels knackered with them. There's a culture of looking after each other in the team. Verbally and practically e.g. SS offering to do a job for LS person. | LS means you can see fluctuations within patient throughout the day, so get a wider feel of what's going on for the patient . If they're difficult to engage it gives you longer to work with on shift to engage them.<br>However on the whole doesn't | Finds having all of a LS easier to complete work. With SS sometimes doesn't finish work on time.<br>x2 SS and a LS are similar lengths, it's about the momentum you get by being on shift for 12 hours in a row. On a LS you read the patient notes | Constantly on the go on a shift, so she doesn't feel knackered. When you're there, in the moment you just don't feel it. Only when she gets home that she just falls asleep on the sofa.<br>However is impacted by |

**Appendix E: Framework Chart Sample**

# Appendix F: Mind mapping used to visualise links between elements




Mind map continued on next page.


Control over time
shift
Around the shift
Fixed shifts
EXPLANATION: 5/6 people who were pro LS worked fixed pattern
Benefits of fixed shifts
Sam: SP: really likes consistency (previous was harder to plan & changed at a days notice)
Simon: SP: Moving to fixed “a revelation”. Improved his experince of LS. Predictable work. (No pattern= chaotic)
Phoebe: SP: really likes it. Can work out what’s happening months in advance. (Irregular “not really a fan”)
Never 1DO at a time, two weekly weekend off.
Bethany: SP: plan months in advance
Bethany: regular shifts good for planning ahead
Non-fixed shifts
Eve: SP: Can mean 1DO, not a proper break
Amelie: SP: frustrating waiting for rota “your life is in someone else’s hands”
Some influence: Amelie: SP: 2 red dots for preference.
Cleo: no routine, didn’t know if coming or going. Irregular DO= not enough sleep at times.
Cleo: gets in the way of planning life
Eve: irregular rota hard to plan DO
Problem w/ fixed shifts: Grace: SP: overtime got in the way
Arranging DO
LS antisocial
Amelie: friends don’t accommodate shifts
Simon: misses friends due to hours
LS worth it for DO
Ella: LS harder but 4DO fortnightly really nice
Abby: prefers LS due to DO
Simon: get your ours in then DO
Benefits of 3-4 DO
Compared to SS
Ella: DO too bitty
Simon: SS time off in eve, too tired
Sam: 4D is a lifestyle. Flexibility.
Doing nice things
Abby: sees friends, appointments
Ella: packs nice stuff in
Simon: DO “clearer, freeer experience”
Sarah: time for housework AND life
Chunks DO and shifts
Tom: clear divide between family & work
Simon: Clear alternation between work & play
Tom: Fewer shifts ,less work prep (travel, ironing)
Ella: Love she can do extra shifts & still have days off. Uses overtime to pay for cleaner
1st DO
For recovery
Amelie: recuperating in bed
Ella: sofa & tv
Katie: catch up on sleep and relax
For housework
Bethany: housework