

YOUNG CHILDREN'S PERCEPTIONS OF PEER OBESITY IN THE CONTEXT
OF OTHER VISIBLE DIFFERENCES

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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

The increasing prevalence of childhood obesity is of serious concern due to its negative physical health and psychosocial consequences. Overweight and obese children often become the target of negative stereotypes and weight-based stigmatisation, and it has been suggested that anti-fat attitudes are held by children as young as three years old. This study aimed to address methodological limitations in the current literature by engaging young children in qualitative research to explore their attitudes towards fatness in the context of other visible differences.

85 children aged 4 – 6 took part in a semi-structured interview using a dyadic approach within Kelly's repertory grid methodology. The children were asked about the visibility and desirability of physical differences in four illustrated characters. They were also asked about their self-image and friendship preferences, and the reasons for their answers. Data from the repertory grids were analysed quantitatively and thematic analysis was used to explore the qualitative data resulting from open-ended interview questions.

The results showed that the majority of children did not consider fatness to be the primary differentiating physical characteristic between peers. They showed a general preference for categorical similarity in their friendship choices and did not demonstrate predominant negativity towards fatness when considering their actual and ideal self-image. There were, however, a minority of children who identified negative characterisations and beliefs, which were reflective of fat stereotypes in the media, and that are evidenced in first hand reports by people with obesity.

The findings indicate that negativity towards fatness amongst this age group have been previously overstated due to the nature of the research methods used. The repertory grid methodology enabled the direction of the study to be guided by the children, which allowed the expression of a few specific anti-fat attitudes within the broader context of negativity towards other 'not-like-me' visible differences.

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CHAPTER 1: INTRODUCTION

The rising prevalence of childhood obesity is a global concern and is being increasingly regarded as “*one of the most serious public health challenges of the 21st century*” (World Health Organisation, 2014). In 2014, the Health Survey for England, part of the National Child Measurement Programme, found that 31% of children aged between 2 and 15 were classified as overweight or obese (Ng Fat, 2015). Childhood obesity presents a significant threat to physical health, which has been linked with an increase in medical care requirements, days off school and health-related limitations (Wijga et al, 2010). Obesity in childhood is a strong predictor of obesity in adulthood (Pulgarón, 2013; Rooney, Mathiason & Schauburger, 2011), both of which increase the risk for development of chronic conditions and premature mortality (Reilly & Kelly, 2011).

In addition to difficulties in physical health, obesity in childhood has been associated with reduced psychosocial wellbeing due to the widespread belief in Western societies that “*fat is bad*” (e.g. Fielden, Sillence & Little, 2011). Children and adolescents who are overweight have been found to be the targets of weight-based stigmatisation, which manifests as bullying and social isolation. This can lead to reduced self-esteem, anxiety and depression, which may persist into adulthood. Despite the increase in the prevalence of childhood obesity, whereby one might expect fatness to become more normalised and accepted, it has been suggested that this stigma has increased over time (Latner & Stunkard, 2003).

Since seminal work in the early 1960s, research has consistently concluded that children like overweight peers less than their healthy-weight counterparts. Overweight children have been found to be less liked than peers with other visible

differences, such as those with physical disabilities or abnormalities (e.g. Richardson, Goodman, Hastorf & Dornbusch, 1961; Latner & Stunkard, 2003), are more likely to be ascribed negative character traits (Kirkpatrick & Sanders, 1978; Wei & Di Santo, 2011) and are assumed to lack competence across physical, social and academic domains (Penny & Haddock, 2007). This stigmatisation of fatness is suggested to be observable from as young as three years of age (Cramer & Steinwert, 1998; Musher-Eizenmann, Holub, Miller, Goldstein & Edwards-Leeper, 2004).

Much of the research into this area has been primarily quantitative in nature. While these studies have been able to establish the presence of negative attitudes towards fatness, they have been unable to ascertain the reasons for these views or how they may have developed. Furthermore, such research has often made use of forced choice methodologies or has only focussed on fatness, in the absence of other visible differences, which may have led to an overestimation of negative evaluations. Historically, there has been an assumption that children cannot meaningfully engage in qualitative research. However, more recently it has been shown that, with the right support, children are able to provide valuable first-hand accounts of their experiences and beliefs (Scott, 2000).

This study aimed to explore young children's perceptions of obesity whilst addressing some of the methodological concerns listed above. Of particular interest was whether obesity was a predominant discriminating factor when placed within the context of other visible differences. The terminology in this thesis has been guided by the language used by the children themselves in relation to the visible differences that they noted. Throughout the tasks, the children most often used the term '*fat*' when describing the image of the overweight character. In line with research which suggests that overweight adults prefer to be described as '*fat*' or "*overweight*"

(Thomas, Hyde, Karunaratne, Herbery & Komesaroff, 2008), these terms will be used throughout this thesis. The exception to this is when “*obesity*” is used to denote a specific medical condition. In addition, when discussing the character with a physical disability, the children focussed on the presence of the wheelchair and therefore reference will be made to ‘*the character in the wheelchair*’ where appropriate.

A comprehensive literature search was conducted using Scopus and Google Scholar and was last updated in May 2016. The following search terms were used in different combinations : “*obesity*”, “*obese*”, “*overweight*”, “*fat*”, “*fatness*”, “*weight*”, “*body size*”, “*healthy*”, “*unhealthy*”, “*stigma*”, “*stereotype*”, “*prejudice*”, “*anti-fat*”, “*attitudes*”, “*understanding*”, “*perception*”, “*awareness*”, “*concerns*”, “*preschool*”, “*child*”, “*children*”, “*childhood*”, “*young*”, “*adolescent*”, “*adult*”, “*gender*”, “*sex*”, “*boys*”, “*girls*”, “*friend*”, “*friendship*”, “*preferences*”, “*disability*”, “*wheelchair*”, “*differences*”, “*visible*” and “*development*”. The review below will begin by providing an overview of the current prevalence of childhood obesity and associated risks from a physical and psychosocial perspective. Research into overweight stigma will be reviewed and critically evaluated before considering research into the development of stereotyping and prejudice in childhood. There will be a discussion of the methodological limitations and gaps in the current literature base, and the ways in which these may be addressed through using a mixture of quantitative and qualitative approaches, in line with developmental considerations for this age group. Finally, the rationale and aims for the present research project will be outlined.

Prevalence of Childhood Obesity

The rising rates of obesity in child populations worldwide are presenting a serious and urgent challenge (World Health Organisation, 2016). In the United Kingdom, recent statistics from the National Child Measurement Programme showed that one fifth of 4 – 5 year olds and one third of 10 – 11 year olds are now classified as overweight or obese (Ng Fat, 2015). These figures varied widely depending on the socioeconomic status of the school's catchment area. There was a positive correlation between overweight status and level of deprivation, with percentages of overweight and obese children in reception and year 6 ranging between 6 – 12% and 13 -25%, respectively.

Physical consequences of childhood obesity

The most common medical consequences of obesity in childhood include early maturation, diabetes mellitus, hypertension and sleep apnoea (Dietz, 1998; Melidonis, Tournis, Kompoti, Lentzas, Roussou, Iraklianiou et al, 2006). Furthermore, childhood obesity has been linked to a multitude of other physical health sequelae including tooth decay, back pain, iron deficiency, asthma and gastrointestinal problems. However, the lack of prospective studies in this area means that directional relationships cannot be established (Pulgarón, 2013). In addition, such physical health difficulties can lead to pain and discomfort during physical exercise. This may cause the individual to become increasingly sedentary, leading to increased weight and further health problems. There is strong evidence to show that obesity in childhood has a detrimental impact on morbidity and mortality in adulthood (Reilly & Kelly, 2011). A developmental trajectory has been found whereby obesity in adulthood can be tracked back to their early childhood

development (Pulgarón, 2013). This is in agreement with Rooney et al (2011) who found that many obese adults were obese as adolescents and likewise obese adolescents were overweight and/or obese in childhood.

This research is limited by the earlier ages at which children are being classified as being overweight and/or obese. There is relatively little literature which considers the physical health impact of paediatric obesity in children under the age of 5 (Pulgarón, 2013). To obtain a more comprehensive understanding of the long term physical consequences of childhood obesity, there is a need to focus investigations on younger populations. Furthermore, prospective measures would be necessary to establish any differences in outcomes following short-term versus chronic obesity.

Psychosocial consequences of childhood obesity

Childhood obesity is not only detrimental to physical health and functional ability but can also have a range of negative psychosocial consequences due to a widespread belief in Western cultures that childhood obesity is socially unacceptable. Rees, Oliver, Woodman and Thomas (2011) reported that children in Western cultures of healthy weights were considerably more concerned with the social unacceptability of obesity, whilst the risks to physical health appeared mostly irrelevant. Psychosocial sequelae include bullying (Brixval, Rayce, Rasmussen, Holstein & Due, 2012; Griffiths, Wolke, Page & Horwood, 2006; van Geel, Vedder & Tanilon, 2014) and social isolation (Puhl & Latner, 2007). Thus weight-related peer victimisation has been found to be positively related to child-reported depression, anxiety, social physique anxiety, loneliness (Storch, Milsom,

DeBraganza, Lewin, Geffken & Silverstein, 2007) and suicidal ideation (Eisenberg, Neumark-Sztainer & Story, 2003).

There is also evidence that the psychosocial consequences of childhood obesity can lead to mental health difficulties in later life (Wardle & Cooke, 2005). However this research is inconsistent with other studies which found no relationship between childhood obesity and future psychopathology (e.g. Viner & Cole, 2005), particularly if the obesity had abated by adolescence (Mustillo et al, 2003). Weight-related victimisation has been found to be negatively correlated with levels of physical activity (Storch et al, 2007). This may have direct consequences for the body shape and physical health of the overweight child and thus serve to increase victimisation, social isolation and stigmatisation.

Weight stereotypes and stigmatisation

Individuals with obesity often become targets of weight stigmatisation, which is defined by Puhl and Latner as negative weight-related “*attitudes and beliefs that are manifested by stereotypes, bias, rejection and prejudice*” (2007, p. 558). Stigmatised people are considered to possess one or more derogatory characteristics causing them to differ from normative expectations and are therefore considered deviant in certain social contexts. Weight stigmatisation is a reportedly common and detrimental experience for individuals who are overweight across the age range (Puhl, Moss-Racusin, Schwartz & Brownell, 2008) and is rarely challenged in Western societies (Puhl & Heuer, 2009). Such stigmatisation has been found to be widespread, in settings such as primary schools (Jansen et al, 2014), high schools (Puhl, Luedicke, & Heuer, 2011), healthcare environments (Foster et al, 2003) and in the workplace (Paul & Townsend, 1995). Obese individuals are often viewed as

impulsive and lacking willpower, motivation and personal control (Puhl & Brownell, 2001).

Such weight-based stereotypes are held across the lifespan, with children tending to assign more negative character traits to overweight than to average- or low-weight individuals. Wei and Di Santo (2011) found that during a story task, young children (aged between 2 years 8 months and 5 years 10 months) would identify the overweight character as being the “mean” one. They justified their choice by saying that the overweight figures were often bullies, selfish and treated others badly. They also suggested that the larger figure looked angrier, despite an absence of facial characteristics on all the figures. Thus, Wei and Di Santo (2011) concluded that the children must have used body size as their cues to predict happiness or anger in each character.

Studies with older primary school aged children have also been found to negatively label overweight characters. Kirkpatrick and Sanders (1978) found that 6 to 9 year olds labelled a fat character as more lazy, sloppy, naughty and dirty than characters of normal weight and in Penny and Haddock’s (2007) study, 5 to 10 year olds considered the overweight character to have lower athletic, academic, social and artistic abilities. Such findings suggest that children who are overweight are perceived to lack competence across a range of domains by their peers, and are consequently thought to be less likeable and socially acceptable. Children aged 9 to 12 years have also been found to believe that weight is under volitional control (Tiggeman & Ansbury, 2000), leading to apportion of blame on their peers who are overweight. Research with children suggests that from age 3 years old there is a positive relationship between children’s perceptions of controllability and negative

stereotyping, and blame was associated with lower ratings of acceptance (Lehmkuhl, Nabors & Iobst, 2010; Musher-Eizenman et al, 2004; Tiggeman & Anesbury, 2000).

These stereotypes are regularly reflected in the media portrayals of fat characters. Studies have found that overweight characters are less likely to be involved in romantic relationships, more likely to be mocked and had fewer positive interactions and screen time than their healthy-weight counterparts (Greenberg, Eastin, Hofschire, Laclan & Brownell, 2003). Fouts and Burggraf (2000) found a positive relationship between the fatness of female television characters and the number of negative comments made about them. Research has found similar stigmatising representations within children's media, with fat characters being associated with more negative traits, such as being evil, unattractive and disliked, while those of healthy weight were more likely to be depicted as sociable, popular, attractive and content (Herbozo, Tantleff-Dunn, Gokee-Larose & Thompson, 2004). This finding was relevant to both human and animal characters.

Social rejection

Being overweight is considered to be "*one of the most stigmatising and least socially acceptable conditions in childhood*" (Schwimmer, Burwinkle & Varni, 2003, p. 1818) and consequently has a substantial impact on children's emotional well-being (Strauss & Pollack, 2003). Children have been found to hold the belief that 'fat is bad' and should be avoided (Fielden et al, 2011), which has detrimental effects on peer relationships and social inclusion. In a review by Rees, Oliver, Woodham and Thomas (2011) they concluded that overweight children were more isolated, less socially accepted and had fewer friends than their peers. Weight-based social discrimination has been found to be common and even viewed as normal

amongst those in early adolescence (Dixey, Sahota, Atwal and Turner, 2001a). Fielden et al (2011) found that both Reception and Year 6 children felt that people who are overweight are bad and an embarrassment to be seen with. Dixey et al (2001a, p. 21) summarised their findings from healthy eating focus groups with the following quote: *“it’s not a good image if you are going around with a fat person”*.

In an early study, Richardson et al (1961) asked 10-11 year old children to look at six character drawings who were identical except for the presence or absence of various physical disabilities. The characters included a ‘healthy’ child, one on crutches, one in a wheelchair, one with a facial disfigurement, one missing a hand and a child with obesity. The children were asked to rank in order which character they liked best. In their sample of 640 children, they found that the healthy character was ranked most highly whilst the obese character was ranked as least liked. This study has since been replicated by Latner and Stunkard (2003) who concluded that not only did these ranking positions still hold 41 years later but that the obese character was liked significantly less, suggesting that weight stigma has increased. This result was obtained despite the increase of childhood obesity in the intervening years, whereas one might hypothesise such normalisation may reduce the level of negative perceptions (Davison & Birch, 2002).

Not only has research concluded that children like peers who are overweight less than their average-sized counterparts, it has also been shown that they wish to interact with them less (Bell & Morgan, 2000). When primary school aged children are asked to choose a best friend or playmate from a series of characters, they have been found to choose normal weight or thin characters as best friends and playmates significantly more frequently than overweight ones (Goldfield & Chrisler, 1995; Musher-Eizenman et al, 2004; Margulies, Floyd & Hojniski, 2008). Cramer &

Steinwert (1998) found that children as young as 3 – 5 years old were less likely to select an overweight character as a playmate. They found that while the 3 year olds were unable to articulate why this was the case, the 5 year olds clearly identified weight as the reason behind their choice.

The experience of social rejection has often been reported in the first-hand accounts of overweight people. In the study by Neumark-Sztainer, Story and Faibisch (1998), high-school aged girls who were overweight spoke about their experiences of being treated differently, being targets of hurtful direct and indirect comments and being rejected due to their weight. These accounts most frequently involved peers; however some involved family members, children and even strangers. These experiences were also echoed in Murtagh, Dixey and Rudolf's (2006) interviews and focus groups with 7 – 15 year old young people with clinical obesity. In Thomas et al's (2008) study, the majority of adults who reported struggling with their weight for most of their lives talked about the experience of social stigma and rejection since childhood. This included being socially isolated, bullied, teased and excluded from activities, and this stigma continued to be experienced through adolescence and in adulthood. Of concern, in Rees et al's (2011) review, it was found that children thought that being treated differently for being fat was to be expected. This notion was illustrated with the following quote: *“you hear people calling them fat but that's just normal isn't it?”* (Murtagh et al, 2006, cited in Rees et al, 2011, p. 6).

There is some research to suggest that as children get older their explicit prejudice against overweight reduces. Sagone and de Caroli (2013) found that older children (8 - 10 years old) expressed considerably more positive attitudes towards overweight characters than their younger counterparts (5 - 7 years old). However,

analyses of their negative implicit attitudes found that these remain constant across the age span. Thus, these observed differences in overweight attitudes could be explained by the impact of social desirability bias in older pupils (e.g. Patel & Holub, 2012), suggesting that despite an awareness that individuals who are overweight should not be stigmatised, the prevailing anti-fat attitudes remained.

Gender and body size differences in weight stigmatisation and social rejection

There have been limited investigations into gender differences in weight stigmatisation amongst children and adolescents, and the results of these studies have been mixed. Latner and Stunkard (2003) and Richardson et al (1961) found that 10 – 11 year old girls showed more anti-fat attitudes than their male counterparts and this pattern has additionally been demonstrated with 4 – 6 year old children (Holub, 2008). Kraig and Keel (2001) also found that 7 – 9 year old boys rated an overweight character more negatively than an average-weight and thin character, whilst the girls rated both the over- and average-weight characters more negatively than the thin one. This suggested that for girls the thin ideal was so salient that even average-weight was undesirable. However, other research looking across similar age ranges has not corroborated these conclusions, finding no significant differences between the genders (Baxter, Collins & Hill, 2015; Cramer & Steinwert, 1998; Patel & Holub, 2012; Tiggeman & Anesbury, 2000).

Similarly, there have been few investigations into the impact of children's actual body sizes on their anti-fat attitudes. One might hypothesise that those who are overweight themselves may show less weight stigmatising views than their healthy-weight peers. However, the limited studies conducted so far have demonstrated limited (Hill & Silver, 1995) or no impact on children's anti-fat

attitudes (Davison & Birch, 2004; Holub, 2008; Kornilaki, 2015). In fact, Cramer and Steinwert's (1998) findings suggested that some preschool aged children who were overweight expressed stronger negative views towards the overweight character than their healthy-weight peers.

Development of stereotyping and prejudice

Categorization is widely assumed to play a key role in the development of social stereotyping and prejudice (Patterson & Bigler, 2006). In early childhood (2 – 4 years of age), children acquire the ability to think symbolically, understand object constancy and view themselves as objects (Demo, 1992). At this stage, children lack the understanding that their own thoughts and feelings differ from those of others and tend to consider themselves in categorical terms such as gender, age and possessions (Piaget, 1962; Keller, Ford & Meacham, 1978). As children get older, they begin to learn that individuals may hold different perspectives to themselves and they develop a hierarchically organised categorical self-concept (Demo, 1992) which they use to understand themselves in relation to others.

“Like-me” preferences

Across the lifespan, it has been found that perceived categorical similarity between two people is linked to levels of interpersonal liking and friendship. It has been suggested that when two people share certain qualities, they are likely to assume that they have similar attributes in other domains (McPherson, Smith-Lovin & Cook, 2001). In school-aged children and adults alike, similarities in attitudes, behaviours, preferences, values and background have been shown to be predictors of initial liking and ensuing friendship (e.g. Duck, 1975; Johnson, 1989; Neimeyer & Mitchell, 1988; Reaves & Roberts, 1983; Urberg, Degirmencioglu & Tolson, 1998).

However, there is a developmental trajectory whereby individual's priorities of important qualities in a friend change across childhood. In a study of 6 to 14 year old children, Bigelow (1977) found that younger children placed importance on more concrete factors such as common activities and proximity whereas older children suggested more psychological qualities such as loyalty and common interests.

More recent research has suggested that in very young children (5 years and under) similarity is predictor of liking (Fabes, Martin & Hanish, 2003; Fawcett & Markson, 2010; Martin, Eisenbud & Rose, 1995). For example, Martin et al (2013) found that young children selected playmates of the same sex and who demonstrated similar levels of interest in gender-typed activities. Even at this age, not all dimensions of similarity are equally powerful indicators of initial attraction. Fawcett and Markson (2010) found that other children's personal preferences and constant physical attributes, such as hair colour, had a stronger impact on attraction, where as temporary (e.g. clothing) or arbitrary attributes (e.g. receiving the same sticker from an adult) had a lesser influence.

Obesity in relation to other visible differences

This understanding that children use a number of different attributes of a character to determine degree of liking has been neglected in childhood overweight stigma research. Studies have predominately explored children's views of weight independently of other characteristics, meaning that it is difficult to separate children's opinions of physical difference more generally, as opposed to those specifically around weight. The few studies which have been conducted to include a variety of physical attributes (e.g. Richardson et al, 1961; Latner and Stunkard, 2003; Harrison, Rowlinson & Hill, 2013) suggest that children tend to view obese peers

more negatively than peers with other visible differences. Furthermore, studies focussing on visible differences other than weight have found that children additionally discriminate against individuals with short stature (Sandberg & Voss, 2002), craniofacial abnormalities (Broder, Smith, & Strauss, 2001) and peers of different races (Aboud, 1988) and gender (Maccoby, 1988). The reality is that individuals are often similar and dissimilar on a number of dimensions (Demo, 1992) and it is unclear which of these factors might be the most salient for children when selecting their playmate preferences.

Methodological limitations and gaps in the literature

While it appears that there is a general consensus that children think ‘fat is bad’ and should be avoided (Fielden et al, 2011), there are a number of methodological limitations and gaps in the literature which need to be addressed before conclusive answers can be drawn. Some of these limitations are outlined below.

Quantitative methodology

The majority of the studies have been quantitative in nature. This means that while relationships between variables have been observed, it is not possible to draw conclusions about why these views might be held and how they have developed. Furthermore, in using this approach, the questions that are imposed on the child are determined by what the researcher has deemed to be important to ask, rather than finding out the views of the individual child. This means that some valuable information about how the child views the different attributes of the character may be lost. To have an understanding at this level would be valuable when considering

how to develop and promote obesity interventions whilst preventing further stigmatisation of individuals who are overweight.

Forced choice methodology

Many of the studies have utilised forced choice methodology which may overestimate negative evaluations and stigmatisation. For example, in Richardson et al's (1961) and Latner and Stunkard's (2003) studies, a child was asked to rank each figure from most to least acceptable. One of the figures must therefore be ranked in last position, however it does not necessarily follow that the child believes this character to be unacceptable but rather is less acceptable than the other target figures. Thus, although studies which involve the rank ordering of characters may be indicative of children's preferences within a set group, it does little to demonstrate the degree of positive and negative attitudes towards each group member (Harrison et al, 2013).

In an early study by Sigelman, Miller and Whitworth (1986), children were asked to assign positive and negative descriptions to images of seven children, which included children of differing gender, ethnicity, body size and physical ability. Children were found to evaluate the obese figure more negatively than many of the other characters. However, the children were required to allocate all of the descriptions (both positive and negative) to the images and therefore had to negatively evaluate at least one of the images. Thus "*the researcher cannot determine whether a picture is selected because it is the preferred choice or because it is the closest or only option*" (Thomas, Butler, Hare & Green, 2011, p. 226). For example, in Wei and Di Santo's (2010) study, the children consistently selected the overweight character as being the "mean" one; however we cannot necessarily

assume this means that the young children thought all overweight people are mean. It may be that the children were avoiding making negative evaluations of the characters that they viewed positively, rather than selecting negative evaluations for the characters that they liked least.

Use of body-size manipulations

Other studies have used Likert scales to rate differently sized images to avoid the forced choice format (e.g. Brylinsky & Moore, 1994; Musher-Eizenman et al., 2004). For example, in a recent study by Durante, Fasolo, Mari and Mazzola (2014), 6 – 11 year old children were shown three cartoon images of either male or female children. Computer software was used to manipulate the series of images for each gender, so that they were all identical to each other except for body size. Children were then asked to answer questions such as “*how much would you like him/her as a friend?*” on a scale from *not at all* to *very much*. The children were found to perceive the overweight character more negatively than the other two; however it is possible that the three differently sized figures could have given clues to the variables of interest. In line with the social desirability bias, the children may have been responding in the way they thought the researcher expected, and therefore such research may have merely identified children’s awareness of weight-based stigma and stereotypes, rather than measuring their own negative attitudes (Jarvie, Lahey, Graziano & Framer, 1983). Furthermore, as discussed previously, individuals vary on a number of different domains. Thus research using figures which vary only one aspect of physical appearance have limited generalisability to real-life social contexts.

Overlooking children's own insights

Historically in child research, the tendency has been for researchers to ask adult respondents, e.g. parents or health care workers, about their perceptions of children's experiences (Scott, 2000). The inclusion of children's experiences from a first person perspective is a relatively recent development. However, despite this change in research approach, Birbeck and Drummond (2005, p. 582) assert that *"research with children tends to be a process that is devised by adults, applied to children with results interpreted by adults, generalised and presented as a theory"*. In Rees et al's (2011) review, they found that studies investigating children's understanding of fatness tended to primarily explore existing theories, and thus suggested that those studies may have been constrained by adult preconceptions of which issues are most salient to the children. They also reported that few studies utilised approaches that *"privilege children's own framing of issues in their lives or started from the position that children themselves may usefully contribute ideas and analyses to help develop theories about their own lives and the questions asked of them"* (p. 10). They concluded that these studies may have yielded different results if the children had been allowed to fully present their own insights and perspectives.

Participant age

There is limited available research on very young children compared to those of older primary school age (Harrison et al, 2013). Lanigan (2011) highlighted the importance of exploring children's understanding at an earlier age, as this is when attitudes and ideas about the world begin to emerge and develop. According to Piaget's (1954) theory of cognitive development, children enter the concrete-operational stage at about age 7 and this lasts until they are around 11 years old.

During this stage, the child begins to be able to apply logical reasoning to physical objects, becomes less egocentric and better able to complete conservation tasks. They also begin to use inductive reasoning, which is the ability to derive general principles from specific observations. However, it has been found that these age boundaries are flexible and if the tasks are suitably adapted and support is provided, children are able to demonstrate these skills at a younger age. For example, Piaget and Inhelder (1954) found that children under the age of 7 were unable to successfully complete their '*three mountains task*' and therefore concluded that children were not capable of non-egocentric thinking before this age. However, Borke (1975) argued that this finding was the product of the task being too difficult and therefore did not make sense to young children. The task was adjusted and it was found that children from the age of 3 were able to demonstrate non-egocentric thinking using the simplified version of the task. This suggests that with the appropriate adaptations to the research methods, children from a much younger age should be able to readily engage.

An alternative approach to obesity research with young children

In order to address the above limitations, a different approach to research needs to be taken. In the following section, the possibility of carrying out qualitative methodology influenced by Personal Construct Theory is considered.

Using qualitative methodology with young children

Butler and Green (2007, p. 5) assert that in order to understand the attitudes of children, researchers need to "*appreciate and fathom young people from the inside looking out, rather than the outside looking in*". This approach emphasises the benefits of using qualitative methods, such as interviews. Despite previously held

beliefs that children are unable to engage in qualitative research due to the level of cognitive demand and communicative ability required, research indicates that with the right support from researchers, young children are able engage in the interview process and provide detailed, reliable and trustworthy accounts of their views and experiences (Mayall, 2000; Birbeck and Drummond, 2005). Interviews have successfully been used in previous research exploring young children's perceptions of overweight and weight gain from the age of four years old (e.g. Baxter et al, 2015). Such methods enable researchers to gain an insight into the perspectives that are most pertinent and salient to the children themselves.

Personal Construct Theory

Kelly (1955) argued that reality was subjective and open to interpretation by individuals in an infinite number of ways. This is central to Kelly's Personal Construct Theory, which proposes that people actively construct an idiosyncratic and changeable understanding of the world and actions should not be compared against external norms (Hare, Searson & Knowles, 2010). Thus, the only way to understand another person's perspective is for the researcher to begin from a non-judgemental position, be open to all possibilities and not impose their own views during the exploration of attitudes (Maxwell, 2006).

Repertory grid methodology

Begley and Lewis (1998) suggest that the limitations identified using forced choice, quantitative methodology can be addressed with the use of repertory grids as a means to access the idiosyncratic views of the world that are held by young people. The repertory grid "*is an attempt to stand in others' shoes, to see their world as they see it and to understand their situation and their concerns*" (Fransella, Bell &

Bannister, 2003, p. 6). This procedure is often used within Personal Construct Psychology as it allows for the inclusion of views which are perceived as most pertinent to the child, rather than those of the researcher (Oosterwegel & Oppenheimer, 1993). A benefit of using repertory grids in research with children is that it does not rely as heavily on verbal fluency as other qualitative methods (Burr, King & Butt, 2012) and it can be adapted to allow for diversity in ability and personal preferences (Thomas et al., 2011). The data generated from the repertory grids allow for both qualitative and quantitative analyses to be conducted, which is desirable due to the growing consensus that both types of data are important (Shek, 2012).

The repertory grid was designed by Kelly as a means to understand the personal constructs that an individual holds. A construct in this regard can be defined as *“the discriminations that we make between people, events or things in our lives”* (Fransella, Bannister & Bell, 2003, p. 18), as we make sense of the world by simultaneously noticing likenesses and differences. Kelly therefore asserted that all constructs are bipolar, in that we do not affirm something without denying the opposite at the same time. For example, by stating that someone is *“assertive”* we are saying that they are *“not passive”* at the same time.

The grids use a series of elements, i.e. *“the things or events which are abstracted by a construct”* (Kelly, 1955, p. 137) to elicit bipolar constructs from individuals to begin to understand their personal views of the world. The elements to be included in a grid are usually chosen by the grid designer and can be almost anything depending on the context to be explored; such as known or unknown people, places and objects (Fransella, Bannister & Bell, 2003). Equally there is great flexibility in the number of elements to be included in a grid, with fewer elements

resulting in a simpler grid. For example, the elements in Baxter, Jack and Schröder's (1998) study consisted of eight photos of different vegetables, while Castiglioni, Pepe, Gandino & Veronese's (2013) elements included the participants' actual and ideal selves, family members and significant others.

Repertory grids are a well-established tool with children in clinical settings (e.g. Fransella & Bannister, 1977; Butler & Green, 2007), however their use in research has been more limited. Baxter and colleagues have successfully utilised this technique with children aged 8 – 11 years in their studies of food preferences (Baxter et al 1998; Baxter, Schröder & Bower, 1999) while other researchers have found this technique useful in investigating the presence of judgements and negative evaluations in adult populations (e.g. Blundell, Wittkowski, Wieck & Hare, 2012) and experiences of being overweight in young adulthood (e.g. Castiglioni et al, 2013). Due to the flexibility of this method, it has been suggested that it may be possible to use them with children as young as four years old (Salmon, 1976) on a wide variety of topics of interest (Shek, 2012).

Typically, the way in which the Repertory grid method is used is through 'triadic elicitation'. This is when the individual is presented with three of the elements on the grid and asked to identify an important way in which two of the elements are alike and therefore different from the third. However, Landfield (1971) found that using dyadic methods, e.g. asking what is different or similar between two elements, are less cognitively challenging and therefore are the preferred method when working with children under 10 years of age (e.g. Fransella & Bannister, 1977).

Aims of the present study

The present study aims to explore how young children construct an understanding of visible differences and how these relate to their own self-image. More specifically, it looks at the salience of different physical features in peers and explored the subsequent inferences that children make about their suitability as a friend. It aims to address the gaps in the present literature by using a mixed methods approach informed by personal construct theory. Gender differences in attitudes were investigated and consideration given to the impact of children's own body weight on their responses.

The primary research questions were:

1. Do young children use fatness as the primary differentiating physical characteristic between peers when compared with other attributes such as gender, disability and clothing?
2. Are young children less likely to select a peer who is overweight than one in a wheelchair or of the opposite gender when making friendship selections?
3. Do young children demonstrate more negativity towards fatness than other characteristics, such as gender, disability and clothing, when considering their actual and preferred self-image?
4. What are young children's reasons for their rejection of peers and their self-image preferences?

CHAPTER 2: METHOD

Design

The study used a semi-structured interview design to ask young children questions about the visibility and desirability of physical differences in their peers and in their own self-image. It utilised a dyadic approach within Kelly's repertory grid methodology as an interview aid.

Participants

Participants were recruited from two primary schools in Leeds, West Yorkshire. One primary school was an inner-city community state school and the other an academy in a town towards the outskirts of Leeds. Letters were sent to each school to provide information about the study and to make a request to conduct data collection with their pupils (Appendix 1). Following permission from the schools' respective head teachers, all parents/guardians of children in Reception, Year 1 and Year 2 were sent a letter requesting consent for their child to participate in the research study (Appendix 2 and 3). Approximately 450 information letters were sent out and consent was provided for 90 children. Each of these children was asked to participate by the researcher and assent was provided by all but one. Four interviews were discontinued prematurely due to the task demands being too high for these participants; therefore interview data for 85 children were included in the analysis. The ages of the children ranged between 4 years, 3 months to 7 years, 1 month (mean = 5 years, 8 months, $SD = 0.67$), with 42 female and 43 male participants. Details of the children's ethnic backgrounds were provided by the schools' records:

61% of participants were White, 31% Asian, 5% Black and 3% Other. None of the participants had any visible physical disabilities.

This study was granted ethical approval by the School of Medicine Research Ethics Committee on 8th July 2015 (Ref: SoMREC/14/075) (Appendix 4).

Materials

Understanding of visible differences

Sets of individual illustrated characters were used in this research, comprising four children who visibly differed on a number of domains including gender, body size, physical ability, clothing and hair (Appendix 5 and 6). The sets were adapted from characters which have been successfully utilised in previous weight-based research projects at the University of Leeds (e.g. Rowlinson, 2011; Baxter et al, 2015). For the purposes of this study, some changes were made to original characters' hair colours and clothing, in order to make each character more visibly distinct from one another. Two sets of characters were made, one with mostly male characters and the other with mostly female characters. The gender set used in each trial corresponded to the sex of the participant, a method that has successfully been used in previous research with children in order to make the stimuli gender relevant for the child (e.g. Latner & Stunkard, 2003; Lowes & Tiggeman, 2003; Richardson et al., 1961). These sets included one overweight character, one character of the opposite gender, one character in a wheelchair, and one “*standard*” character who was gender matched to the participant, able-bodied and of healthy-weight. A card simply marked “*YOU*” was also used to represent the participant (Appendix 7).

In order to structure the interviews, the researcher used a repertory grid template with each character (element) along the top. For the first section of the task, the grid provided space for character selections and three bipolar constructs to be recorded. Given the young ages of the children, the minimum number of constructs necessary were elicited in order to keep the interviews brief. As the four characters in the study represented three primary physical differences (gender, physical ability, weight) it was decided that the elicitation of three bipolar constructs should provide sufficient data. The grids additionally provided four rows for the answers to the second part of the task to be recorded (Appendix 8 and 9).

Estimation of body size

The present study was interested in whether the children's own body sizes were associated with their perceptions of overweight in peers. Due to the intrusiveness of taking anthropometric measurements of young children and the potential negative impact on gaining parental consent, the Collins (1991) scale (Appendix 10) was used to estimate the body size of each participant. This is a pictorial scale featuring seven preadolescent figures of increasing body size, ranging from *very thin* to *obese*, labelled 1 to 7, respectively. This scale has been used in numerous research studies to investigate differences between young children's *perceived* and *ideal* body sizes (e.g. Holub, 2008). However, research has suggested that young children's ability to estimate their own body size is often poor (Montoya, Boursaw, Tigges & Lobo, 2016; Saxton, Hill, Chadwick & Wardle, 2009), and the reliability of this measure with children under 6 years of age has not been established (Truby and Paxton, 2002). Thus the body size of each participant was estimated by the researcher after assent was ascertained.

Procedure

The interviews took place between July 2015 and January 2016 in quiet areas of the school or classroom during the usual school day. The researcher was first introduced to each participating class and the teachers explained that some pupils would be asked to take part in a small task with the researcher. The teachers were then provided with a list of children from their class who had been given consent to participate. The teacher selected the first child to take part and the researcher accompanied them to the research area and asked them to sit at the table.

The researcher sat next to the child and checked the child's name and age. The child's assent to take part in the study was established using the protocol outlined in Appendix 11. If the child agreed to take part, the researcher thanked them, assigned them a participant number and made a visual estimation of body size using the Collins (1991) scale. The researcher started the audio recording and selected the corresponding gender image set and repertory grid.

The researcher then spread the four character illustrations out on the table in front of the participant; with the "You" card remaining out of sight. The four cards were arranged in the same order that they appeared on the repertory grid to ensure consistency between each trial. The standard character was picked out and placed directly in front of the participant by the researcher. Using the interview schedule outlined in Appendix 12, the child was first asked to select the character which they thought was most different from the character in front of them. Their selection was then placed next to the first image and the two remaining pictures were turned face down, so as not to distract or influence the child. They were then asked why they picked that picture.

If the child provided a number of differences that they noticed, they were prompted to select the most important one. Similarly, if the child only provided one pole of the bipolar construct, the researcher gave a prompt to elicit the other pole. All cards were then turned face down and the child was asked whether they would prefer a friend who possessed either pole of the construct, for example, *“Would you prefer to have a friend who is a boy or a girl?”*. In accordance with the personal construct approach, the question was asked using the exact wording that the child had used to represent the two construct poles, even if this was not grammatically accurate or used incorrect terminology. They were then asked to provide the reason for their answer.

All pictures were then turned face up again and the standard character was then returned to its original position, so that only the selected ‘most different’ picture remained in front of the child. The participant was then asked to identify which character they thought was most different to the one in front of them, but for a reason other than the one they just gave, e.g. *“Which one of these children is most different to this one but not because this one is a girl, another reason?”* The previously outlined procedure was then repeated until three sets of bipolar constructs and friendship selections had been recorded.

All pictures were returned face up to their original positions. The researcher placed the “YOU” card in front of the child and explained that this card was being used to represent them. The child was then asked to identify which picture they were most similar/different to, who they would most/least like to be like, and the reasons for their choices. The audio recording was then stopped and the child was allowed to choose a reward sticker to thank them for their participation. The researcher then accompanied them back to the classroom and another child was selected by the

teacher until all children with parental consent had been given the opportunity to participate.

Throughout the interviews, the researcher used the grid to keep a record of the child's responses, in order to supplement the audio recording. The selected characters were marked on the grid with crosses in the corresponding boxes along the first three blank row. The two poles of the construct were noted on either side of the row, with the pole referring to the character closer to the left hand side of the grid being noted in the far left hand column and vice versa. The character that the child selected as a preferred friend was additionally marked with an asterisk and notes made about the reasons for their selection. For the latter half of the task, selections and answers were similarly noted in the bottom four rows of the grid.

Pilot study

Due to the lack of published research using the repertory grid method with this age group, particularly in relation to prejudice and stigma, an initial pilot study was conducted. Six trials were undertaken in order to assess the suitability of the method for this research and allow any adaptations to be made as necessary. The children's ages ranged between 4 years 4 months and 10 years 4 months, with a mixture of male and female participants. All six children were able to complete the task and so the methodology was deemed appropriate and effective. Following a response from one participant who thought the overweight female character was an adult, while the others were children, an additional line was added to the interview schedule to state that "*all these children are the same age*". No further changes were made.

Data analysis

All data collected on the repertory grids, including the children's picture selections, identified bipolar constructs and friend preferences, were entered into a Microsoft Excel spreadsheet. The constructs elicited were organised into one of 7 categories by the researcher to summarise the children's main reason for their choice. These were then classified as either representing a primary difference (gender, weight, wheelchair) or secondary difference (hair, height, clothes, other). Descriptive statistics and chi-squared tests were conducted on the grid data to establish the frequency and order of children's picture selections, reason categories and classifications, and whether there were any significant differences in selections and between male and female participants.

The children's qualitative responses to the interview questions were transcribed verbatim by the researcher and added to the spreadsheet for thematic analysis. The transcripts were read several times, patterns of meaning identified and codes applied to each section of the transcripts pertinent to the research question (Braun & Clark, 2006). These codes were sorted into broader themes, which were clearly defined and named, and examples from the transcripts chosen to illustrate them.

CHAPTER 3: RESULTS

In the following section, the results pertaining to each research question will be addressed in turn. Gender differences in the data set are investigated and discussed throughout the results. Finally, there is a discussion of whether there were any notable relationships between children's answers and their own body sizes.

Do young children use fatness as the primary differentiating physical characteristic between peers when compared with other attributes such as gender, disability and clothing?

The children were all asked which character they felt was the *most different* from the standard character (Table 1). All 85 participants attempted this section of the task; however one child was unable to understand the task requirements and therefore the responses from 84 children have been included in this part of the analyses. There were no significant differences in the frequency of choice of the three characters ($\chi^2(2) = 2.14, p = 0.90$).

Table 1: The character chosen as 'most different' from the standard character

Choice 1 – most different from standard		
Fat	29	34.5%
Opposite Gender	26	31.0%
Wheelchair	29	34.5%
Total	84	

After making their choice, the researcher asked the children to identify what was different between the presented characters. The constructs elicited were subsequently classified as either a primary difference (gender, fatness, wheelchair) or a secondary difference (hair, height, clothes, other).

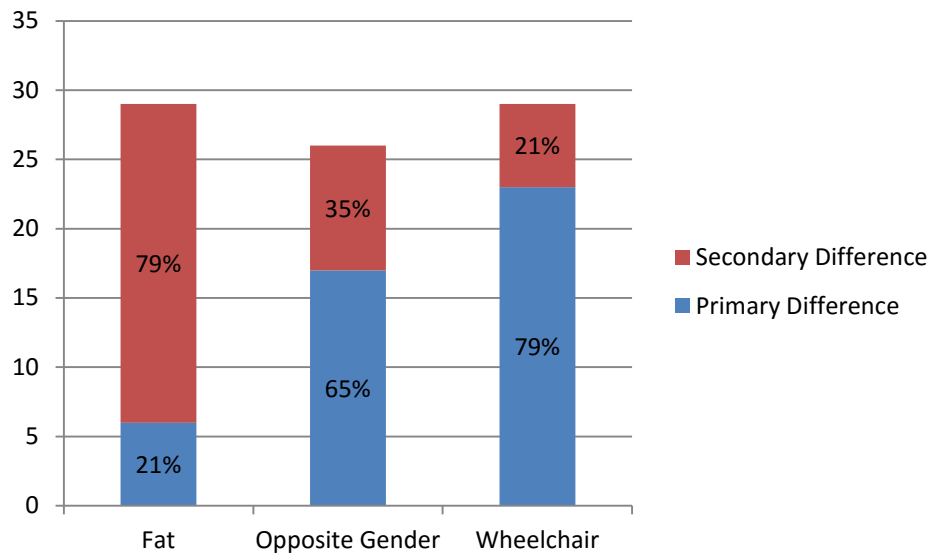


Figure 1: Proportion of primary vs secondary differences elicited for the three choices

Figure 1 shows that children who chose either the character of the opposite gender or the character in the wheelchair tended to identify the respective primary difference as the reason behind their selection. Interestingly, only 21% (N = 6) of the children who selected the fat character identified fatness as the main difference, with the other 79% citing secondary differences. Thus out of the 85 children who took part in the task, only 7% identified fatness as a construct (Table 2). The children were significantly less likely to identify a primary difference in relation to the fat character than the character of the opposite gender and character in a wheelchair. ($\chi^2(2) = 21.83, p < 0.005$).

Focussing on those who selected the fat character as the most different to the standard character, Table 2 shows that children most often expressed constructs related to hair (38%), followed by differences in clothing (31%). Three of the children additionally noted a perceived difference in height.

Table 2: The main difference children identified between the standard character and their chosen characters

Construct category		Choice 1 – most different from standard						Total	
		Opposite gender N = 26		Fat N = 29		Wheelchair N = 29			
Primary difference	Gender	17	(65%)	0	0%	0	(0%)	17	(20%)
	Fatness	0	(0%)	6	(21%)	0	(0%)	6	(7%)
	Wheelchair	0	(0%)	0	0%	23	(79%)	23	(27%)
Secondary difference	Hair	4	(15%)	11	(38%)	1	(3%)	16	(19%)
	Height	0	(0%)	3	(10%)	1	(3%)	4	(5%)
	Clothes	5	19%)	9	(31%)	3	(10%)	17	(20%)
	Age	0	(0%)	0	0%	1	(3%)	1	(1%)

After the children's constructs describing the most important differences had been elicited, the standard character was then placed with the remaining two characters. The children were asked to select which of the three pictures was *most different* to the previously selected character for any reason other than the one which they first identified. This process was repeated until three bipolar constructs had been identified. The children's identified constructs across the three choices can be seen in Table 3 and Figure 2.

Table 3: Number of each construct category elicited over three choices

Construct Category	Choice 1		Choice 2		Choice 3		Total	
	N	(%)	N	(%)	N	(%)	N	(%)
Gender	17	(20%)	8	(10%)	4	(5%)	29	(12%)
Fatness	6	(7%)	7	(8%)	6	(7%)	19	(8%)
Wheelchair	23	(27%)	27	(32%)	15	(18%)	65	(27%)
Hair	16	(19%)	14	(17%)	18	(21%)	48	(20%)
Height	4	(5%)	2	(1%)	2	(2%)	8	(3%)
Clothes	17	(20%)	24	(29%)	31	(37%)	72	(29%)
Other	1	(1%)	1	(2%)	2	(2%)	4	(2%)
Total	84		83		78		245	

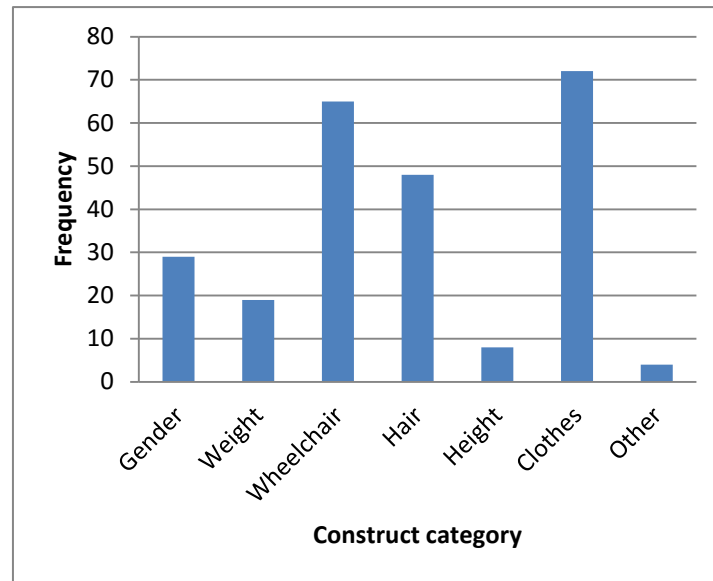


Figure 2: Frequency of construct categories elicited across the three choices

Of the 84 children who took part in the first section of the task, one child struggled to repeat the task a second time and was unable to provide a construct. Similarly for the third repetition, a further five children did not provide a construct. Therefore, 83 and 78 constructs were analysed for the second and third repetitions, respectively. Overall, the most frequently identified constructs related to the characters' clothing ($N = 72$, 29%), followed by the use of a wheelchair ($N = 65$, 27%), hairstyle ($N = 48$, 20%) and then gender ($N = 29$, 12%).

Fatness as a construct was elicited on 19 occasions (8%) across the three choice repetitions, making it the fifth most common construct category of seven. The least frequently identified constructs related to height (3%, $N = 8$) and 'other' characteristics which included one reference to skin colour ("*tanned / not tanned*"), age ("*older / younger*") and two references to specific body parts ("*has a chin / doesn't have a chin*"; "*bigger head / smaller head*"). There was no association between the construct categories identified and the gender of participants ($\chi^2(6) = 10.90$, $p = 0.09$) (Table 4).

Table 4: Total frequency of construct categories elicited by male and female participants

Construct category	Constructs elicited over three choices	
	Boys	Girls
Gender	11 (9%)	18 (15%)
Fatness	12 (10%)	7 (6%)
Wheelchair	35 (29%)	30 (24%)
Hair	19 (16%)	29 (24%)
Height	6 (5%)	1 (1%)
Clothes	35 (29%)	37 (30%)
Other	4 (3%)	1 (1%)
Total	122	123

It must be noted that one female participant identified fatness as the most important difference on two consecutive occasions, despite prompting to provide an alternative on the last occasion. Thus of the 85 children who took part in this research, only one fifth of the children (21%) identified ‘fatness’ as a construct across the three choices, compared with 34% and 76% for ‘gender’ and ‘wheelchair’, respectively.

Are young children less likely to select a peer who is overweight than one in a wheelchair or of the opposite gender when making friendship selections?

Once the children had provided their bipolar construct (e.g. “*he’s in a wheeler, he’s standing up*”), they were asked to choose which characteristic they would prefer in a friend. Over the 19 occasions on which fatness was elicited as a construct, only one said they would prefer a friend who was fat (“*bigger*”) than one who was not (“*smaller*”) (Table 5). Thus a healthy-weight character was significantly more likely to be selected as the child’s friend than one who is fat ($\chi^2(1) = 15.211, p < 0.005$).

Table 5: Children's friendship choices when construct relates to 'Fatness'

Fatness as construct - Preferred friend				
	Healthy weight	Fat	Both	Total
Choice 1	6	0	0	6
Choice 2	7	0	0	7
Choice 3	5	1	0	6
Total	18	1	0	19
Total as % (N = 19)	95%	5%	0%	

Similarly, children were significantly more likely to select a friend who was not in a wheelchair ($\chi^2(2) = 56.25, p < 0.005$) or one who was of the same gender ($\chi^2(2) = 19.93, p < 0.005$) when the constructs related to 'Wheelchair' and 'Gender', respectively (Tables 6 and 7). Accordingly, when looking at those children who made a friendship choice (i.e. excluding those who stated they wanted to be friends with both), there was no association between friendship preference and construct ($\chi^2(2) = 3.34, p = 0.19$).

Table 6: Children's friendship choices when construct relates to 'Wheelchair'

Wheelchair as construct - Preferred friend				
	No Wheelchair	Wheelchair	Both	Total
Choice 1	19	8	0	27
Choice 2	18	4	1	23
Choice 3	12	3	0	15
Total	49	15	1	65
Total as % (N = 65)	75%	23%	2%	

Table 7: Children's friendship choices when construct relates to 'Gender'

Gender as construct - Preferred friend				
	Same Gender	Opposite Gender	Both	Total
Choice 1	14	2	1	17
Choice 2	6	1	1	8
Choice 3	1	1	2	4
Total	21	4	4	29
Total as % (N = 29)	72%	14%	14%	

Do young children demonstrate more negativity towards fatness than other characteristics, such as gender, disability and clothing, when considering their actual and preferred self-image?

Actual characteristics

In the second part of the task, the ‘You’ card was introduced and added to the four characters. The children were asked to consider to which of the four characters they were most and least similar, and why. All 85 children took part in this section of the task; however one participant struggled to understand the question “*which of these four children are you most different to?*” and thus did not provide an answer (Table 8).

Table 8: Children’s most similar to- and most different to- character selections

	Most similar	Most different
Standard	59 (69%)	8 (10%)
Opposite gender	0 (0%)	28 (33%)
Fat	13 (15%)	24 (29%)
Wheelchair	13 (15%)	24 (29%)
Total	85	84

The majority of the children felt that they were most similar to the standard character (69%), while 15% of the participants felt that they were most like the fat character and the character in a wheelchair. None of the children felt that they were most similar to the character of the opposite gender. Similarly, when asked to whom the children felt they were most different, they were most likely to select the character of the opposite gender (33%), followed equally by the fat character (29%) and the one in the wheelchair (29%), and lastly by the standard character (10%) (Table 8). Participant gender was not associated with ‘most similar to’ choices (χ^2 (2)

= 4.66, $p = 0.097$), but was associated with the children's 'most different to' choices ($\chi^2(3) = 10.58$, $p < 0.05$) (Table 9). With respect to the latter, boys more frequently identified being most different to the character in the wheelchair while girls felt they were most different from the character of the opposite gender and the standard character. There was no association between participant gender and the identification of the fat character as being 'most different to' themselves ($\chi^2(1) = 0.67$, $p = 0.414$).

Table 9: Boys' and Girls' most similar to- and most different to- character selections

	Most similar		Most different	
	Boys	Girls	Boys	Girls
Standard	33 (77%)	26 (62%)	1 (2%)	7 (17%)
Fat	7 (16%)	6 (14%)	14 (33%)	10 (24%)
Opposite Gender	0 (0%)	0 (0%)	11 (26%)	17 (41%)
Wheelchair	3 (7%)	10 (24%)	17 (40%)	7 (17%)
You	0 (0%)	0 (0%)	0 (0%)	1 (2%)
Total	43	42	43	41

After making their selections of which character they felt most similar to, the children were asked to give a reason. Of the 85 responses, only seven children (8%) made reference to fatness in their reasons (Table 10). Six of these fatness references were in relation to being most similar to the standard character ("*thin*", "*skinny*") and the remaining one related to the fat character ("*bit fat*"). While one child was unable to provide an answer, the remaining 77 responses (92%) referred to other characteristics including wheelchair use, gender, height and clothing.

Table 10: Number of fatness-related reasons for most similar character selections

	Reason refers to fatness – Most similar		
	Reason related to fatness	Total character selection	Fatness reason % of total
Standard	6	59	10%
Opposite Sex	0	0	0%
Wheelchair	0	13	0%
Fat	1	13	8%
Total	7	85	8%

Of the 24 children who felt they were most different to the fat character, nine (38%) expressed reasons relating to fatness (e.g. “*big belly*”, “*fat*”), three children were unable to provide a reason and the remaining 13 (62%) children gave a reason relating to other characteristics including hair and clothing style (Table 11). Fatness was not referenced in the reasons for the selection of the standard, opposite sex or wheelchair characters and therefore fatness-related reasons made up only 11% of the total responses.

Table 11: Number of fatness-related reasons for most different character selections

Reason refers to fatness – Most different			
	Reason related to fatness	Total character selection	Fatness reason % of total
Standard	0	8	0%
Opposite Sex	0	28	0%
Wheelchair	0	24	0%
Fat	9	24	38%
Total	9	84	11%

Preferred characteristics

The children were then asked to identify which character they would most- and least- like to be (Table 12). 85 children participated in this part of the task; however one child declined to answer the final question as he wished to return to his class. In terms of the character which the children *most* wanted to be, the majority of the children selected the standard character (68%), followed by the wheelchair (21%), fat (8%) and opposite gender (8%) characters. Accordingly, this order was reversed for the characters selected as the one children *least* wanted to be, with the fewest children selecting the standard character, followed by the wheelchair (24%), fat (28%) and the most selecting the opposite gender character (46%). The only exception was one child who stated that they least wanted to be themselves. Participant

gender was not associated with the character selected as who they would most- (χ^2 (3) = 2.63, p = 0.452) or least want to be (χ^2 (3) = 3.72, p = 0.293) (Table 13).

Table 12: Children's would most like to be- and least like to be- character selections

	Most want to be		Least want to be	
Standard	58	(68%)	0	(0%)
Opposite gender	2	(2%)	39	(46%)
Fat	7	(8%)	24	(28%)
Wheelchair	18	(21%)	20	(24%)
You	0	(0%)	1	(1%)
Total	85		84	

Table 13: Boys' and girls' most want to be- and least want to be- character selections

	Most want to be		Least want to be	
	Boys	Girls	Boys	Girls
Standard	31 (72%)	27 (64%)	0 (0%)	0 (0%)
Fat	4 (9%)	3 (7%)	14 (33%)	10 (24%)
Opposite Gender	0 (0%)	2 (5%)	16 (38%)	23 (56%)
Wheelchair	8 (19%)	10 (24%)	12 (29%)	8 (20%)
You	0 (0%)	0 (0%)	0 (0%)	1 (2%)
Total	43	42	42	42

The children's reasons were analysed and only one child (1%) spoke about fatness in their reason for who they most wanted to be (Table 14), in reference to the Standard character ("*skinny*"). In contrast, 79% of the children who stated they least wanted to be the fat character referred to fatness in their answer (e.g. "*wide*", "*fat*", "*big*"), though no other children mentioned this when talking about the other character choices (Table 15). Thus, fatness was mentioned in 19% of the total reasons for the 'least like to be' character selections.

Table 14: Number of fatness-related reasons for 'most like to be' character selections

Reason refers to fatness – Most want to be			
	Reason related to fatness	Total character selection	Fatness reason % of total
Standard	1	58	2%
Opposite Sex	0	2	0%
Wheelchair	0	18	0%
Fat	0	7	0%
You	0	0	N/A
Total	1	85	1%

Table 15: Number of fatness-related reasons for 'least like to be' character selections

Reason refers to fatness – Least want to be			
	Reason related to fatness	Total character selection	Fatness reason % of total
Standard	0	0	N/A
Opposite Sex	0	39	0%
Wheelchair	0	20	0%
Fat	19	24	67%
You	0	1	0%
Total	19	84	19%

What are young children's reasons for their rejection of peers and their self-image preferences?

Thematic analyses were conducted on the children's responses regarding their friendship and self-image preferences. Two main themes were elicited in both instances, *physical* and *social*. These themes were each made up of subthemes, which are displayed in Figures 3 and 4, alongside illustrative quotes. On occasion, the children's responses would overlap two or more subthemes. This is in line with the view that attitudes and understandings are complex and involve a number of different interrelated aspects of knowledge and beliefs. In these instances, all

relevant thematic codes were applied to the response and considered a part of each subtheme, accordingly.

Peer rejection

After the children had stated the differences between two characters (e.g. “*that one is a boy; that one is a girl*”), they were asked to say which of those characteristics they would prefer in a friend and the reasons for their answer. The responses from the children often only included reasons for preferring a particular peer (e.g. *because girls are nicer, because they have nicer hair*”), as opposed to a reason for rejection of the other. However, it cannot be inferred that the lack of reference to the character which was not selected as a friend equates to a reason for rejection. Thus, only responses which directly referred to the reasons for rejection of a character were included in this thematic analysis. Figure 3 illustrates the children’s reasons for *rejecting* a peer who is fat, in a wheelchair or of the opposite gender. The subthemes have been organized into the two master themes of *physical* and *social*, and are connected to the characters to which they apply.

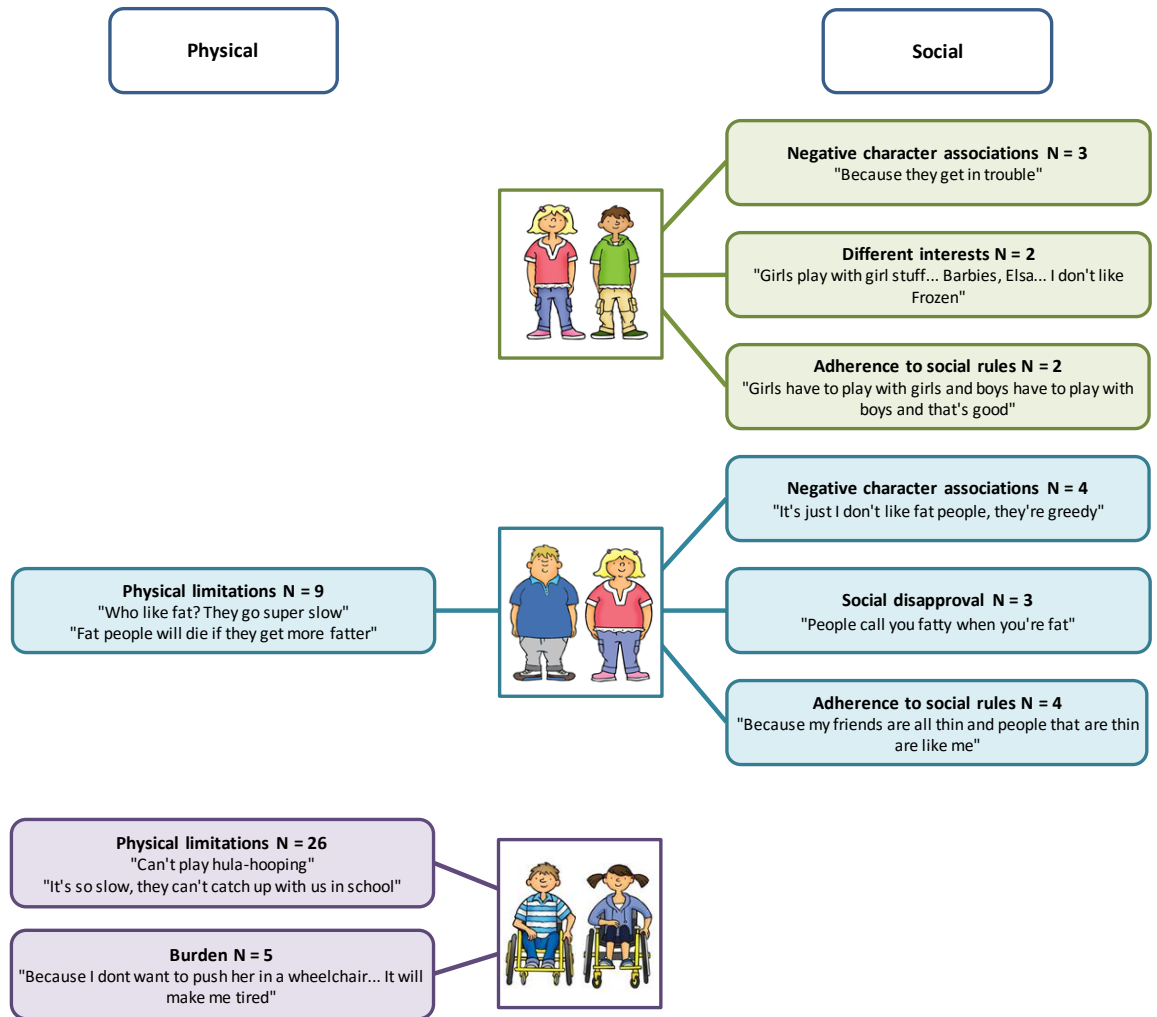


Figure 3: Thematic summary of young children's reasons for rejecting peers who are the opposite gender, fat, or in a wheelchair.

Physical

The major theme of *'physical'* is defined by features of the characters that are tangible and visible. The *'physical'* theme is made up of two subthemes, *physical limitations* and *burden*. The majority of the responses elicited related to *physical* reasons with regards to the wheelchair and fat characters, however there were no responses regarding the rejection of the opposite gender character which fit this theme.

Of the 19 children who identified fat as a construct, nine children discussed physical limitations as a rationale for rejecting a fat child as a friend, and this was the most common subtheme elicited. The children associated being fat with being “*slow*” and unable to perform particular activities in comparison to those of a healthy weight, such as “*skip properly*” or “*reach over*”. Some of the children additionally noted the impact of fatness on a person’s physical health. For example, one child expressed concerns about having a friend who is overweight because “*fat people will die if they get more fatter*”, as she did not wish to have a friend who could pass away prematurely.

Similarly, physical limitations were the most common reason for rejecting a child in a wheelchair. Their understanding was that children might need to use a wheelchair if they were “*injured*” or had “*hurt themselves*”. Children were concerned that peers in wheelchairs would “*not be able to walk*”, would be “*slow*” and/or that their “*wheels stop them playing a game*”. They often added how such physical limitations might prevent them from joining in with activities that the children enjoyed. For instance, “*me and my friends who are skipping and she can’t skip*”; “*if they were in a wheelchair, they wouldn’t be able to play with me very much... they wouldn’t be able to play some running games*”. One child additionally expressed a worry about this peer being vulnerable to injury during play, stating “*I don’t want to hurt them... [when] playing*”.

Associated with physical limitations regarding the wheelchair user was the subtheme of “*burden*”. Five of the children specifically stated that they would not want to have a friend in a wheelchair due to an added responsibility to “*look after them... help them get dressed*” or “*push him up a steep thing*”. None of the children

reported feeling a sense of duty to assist a fat peer in instances where they might struggle to engage in physical activities.

Social

The major theme of '*social*' encompasses subthemes which relate to the interpersonal aspects of the children's worlds, i.e. factors which may only be identifiable through interactions with others. The four subthemes include '*negative character associations*', '*different interests*', '*adherence to social rules*' and '*social disapproval*'.

A few of the children described negatively stereotyped character traits which they associated with peers who are a member of the opposite gender or fat. For example, three of the female participants talked about boys being more aggressive ("*do fighting*") and more likely to get into trouble than their female counterparts. One child additionally described her experience of being "*pushed onto that handle thing and it hurt*" by a male peer in her class and felt this was not something that a girl would do. With regards to the fat character, two of the children made reference to them being "*greedy*" and suggested that their fat peers possessed a lack of control with regards to food ("*no people have to be fat like her... they eat lots of things*"), of which they disapproved.

A couple of the children demonstrated stereotyped views about the interests and activities of the opposite gender. They suggested that they would not have shared interests and therefore would not want to be friends with them compared against a peer of the same sex. This was clearly demonstrated by one boy who stated that "*boys are cool... they do a lot of fun stuff... play tig, hide and seek and play with*

these little toys [Lego]... girls play with girl stuff... Barbies, Elsa... I don't like Frozen".

A few of the children made reference to a need to follow social rules about who should be friends with whom. These rules seemed to dictate that children should be friends with 'like-me' peers and not friends with those who were different. Such rules were referred to in reference to fatness ("*because then we are all the same... the fat one has another fat friend and they two are friends*" / "*I like normal people... they be friends... [fat people] don't play with you... because they don't like normal people*") and gender ("*boys have boy-friends and girls have girl-friends*").

Three of the children preferred to be friends with a healthy weight peer over one who is fat due to concerns about them being teased or rejected by others. For example, one young participant stated "*I don't like somebody to be fat... 'cause somebody sees them and they be fat and they will laugh at them... My dad's friend is fat. He has a fat tummy... That's not funny, my dad says, but they laugh*". Another child additionally suggested that this teasing might prevent the fat character from engaging in enjoyed activities ("*can't play because everybody laughing at her because she has a big tummy*"). There were no responses related to this subtheme in reference to the gender or wheelchair constructs.

Preferences for self

The final question of the task asked the children to identify which character they would least like to be and why. A thematic analysis was conducted on their reasons for their choices. As none of the participants chose the standard character, Figure 4 shows a thematic summary of reasons for the rejection of the opposite

gender, fat and wheelchair characters. In a similar vein to the thematic summary in Figure 3, the two main themes identified from these data were “*physical*” and “*social*”, which both have three different subthemes within them.

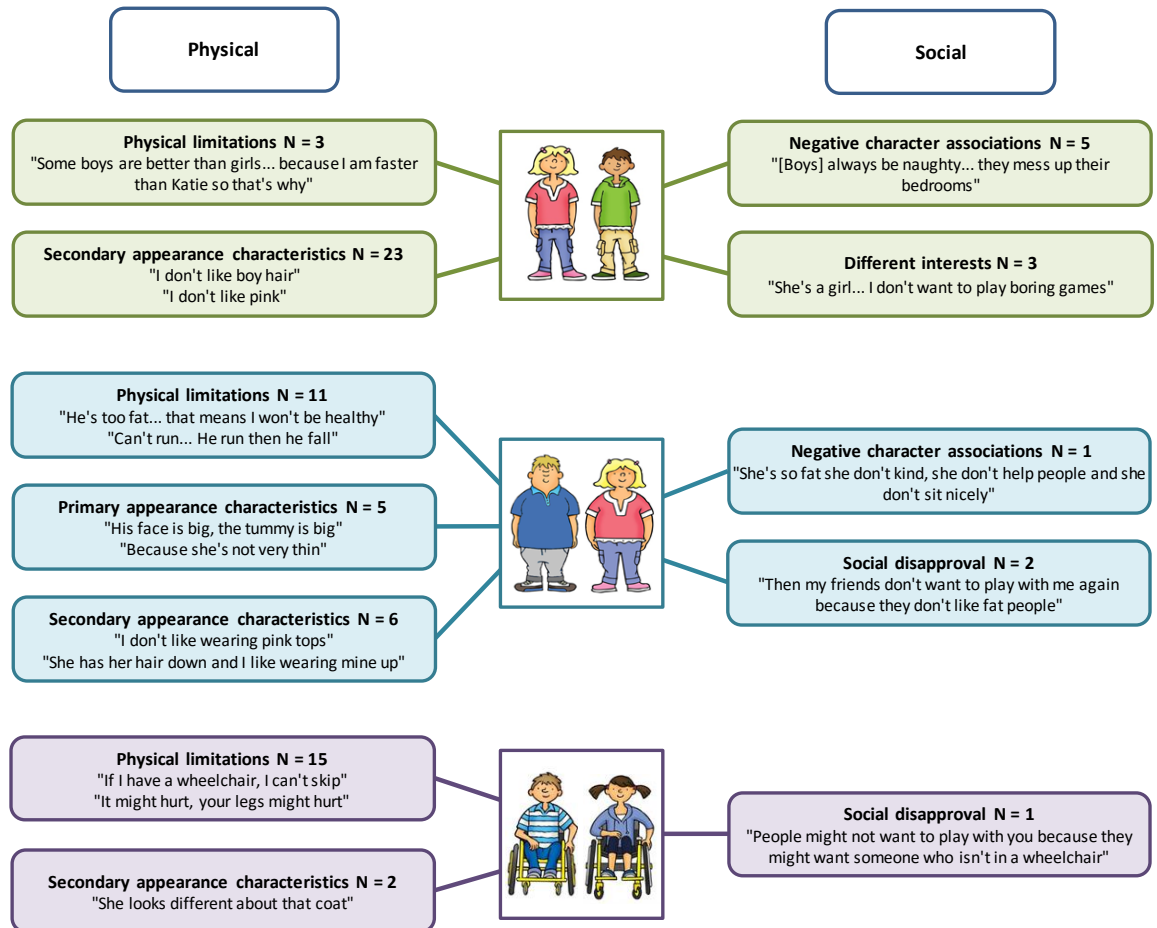


Figure 4: Thematic summary of young children's reasons for their selection of the character that they 'least wanted to be'.

Physical

Children cited physical reasons in relation to all three characters and the majority of responses fit within this theme. The subthemes of “*physical limitations*” and “*secondary appearance characteristics*” applied to all three characters, while

the subtheme of “*primary appearance characteristics*” pertained only to the fat character.

In accordance with the children’s reasoning for friendship rejections, physical limitations were often cited as a reason for not wanting to be a particular character. When talking about the wheelchair character, participants discussed reduced mobility and the impact it might have on performing enjoyed activities (“*I wouldn’t walk and I like running as well*” / “*if I have a wheelchair I can’t skip*”). They additionally discussed some concerns with regards to their health and wellbeing, for example, fearing that their “*feet might hurt*” or that you would “*be poorly*”. Similarly, participants expressed concerns that if they were to be fat then they would not be able to “*run*”, would be “*slow*”, “*might fall*” or “*get stuck*”. A few of the children additionally associated fatness with “*being unhealthy*” and this could have negative consequences for one’s physical wellbeing (“*he’s too big... you pop*” / “*I don’t want to die*”).

Further, two of the children made comparisons between the physical abilities of the fat and wheelchair characters, speaking more favourably of the latter due to the wheelchair compensating for mobility difficulties (“*[fat character] can’t run fast but he can wheel*”) and also because of the idea of fairness (“*[fat character] can’t run or walk, you run slowly... not fair [wheelchair character] can’t run, they’re not allowed to run*”). This idea that it isn’t fair that the wheelchair character cannot run implies that the fat character is responsible for their physical limitations, and therefore was thought of less favourably.

Three children discussed physical limitations in relation to gender. The assumption from all three was that boys were “*faster*” than girls (“*[boys] can run*

faster... I can run really fast”). Two of these participants were boys who did not want to compromise on their physical superiority, while the other was a girl who was worried she would not be able to keep up with her male peers (“*He is a boy and I’m a girl... [boys] have to run really fast and I can’t run fast*”).

A large proportion of the reasons related to disfavoured secondary characteristics of each character. The children cited characteristics such as hair (“*I don’t like his hair... It looks messy*”), clothing (“*got nasty pockets*”) and shoes (“*because she’s got pink shoes on*”) as their rationale for least wanting to be like them. These responses were particularly made towards to the character of the opposite gender, with 23 children making reference to their hair and the clothes that the character was wearing.

Six children discussed secondary appearance characteristics in relation to the fat character and, of note, three of these children did not mention the characters fatness, solely referring to clothes and hair styles in their rationale for rejecting this character. Neither of the children who discussed clothing in relation to the wheelchair character referred to the wheelchair in their response.

The subtheme “*primary appearance characteristics*” is relevant only to the fat character and is typified by responses which made explicit reference to the *appearance* of the primary characteristic as the main reason for rejection. Only five of the 24 children who selected the fat character made direct reference to their fat appearance. Examples of this included, “*his face is big, his tummy is big*” and “*she’s like a fat thing... she’s so fat*”. This is in contrast to the many children who described the character as being “*fat*” in their reasons, but then discussed this in relation to other subthemes, such as *physical limitations* (e.g. “*she’s fat... she can’t*

run”). Similarly, many children made reference to the wheelchair as their reason for rejection; however this was always in regard to other factors, rather than the physical appearance of the chair itself.

Social

The ‘social’ theme encompassed subthemes relating to “*negative character associations*”, “*different interests*” and “*social disapproval*”. Negative character associations were elicited on five occasions in relation to the characters of the opposite gender. These reasons included stereotypes such as boys being unclean (“*I don’t like him because he’s stinky because he don’t take a bath*”) and being aggressive (“*they do boy stuff like fighting*”), which children suggested was contrary to their female peers. Additionally, two of the children referenced specific experiences which lead to their understanding of the opposite gender as having undesirable personality characteristics. For example, one young boy stated that he did not want to be the female character “*because she’s a girl... my sister is a girl and she is nasty to me*” while a girl suggested that “[*boys*] *be nasty to me... they say “I win, I win” and laugh at me*”. In relation to the fat character, one child similarly suggested that they might possess less desirable personality characteristics than their healthy weight counterparts (“*because she’s so fat, she don’t kind, she don’t help people and she don’t sit nicely*”). None of the 20 children who selected the character in the wheelchair gave reasons in keeping with this subtheme.

Different interests were raised only in relation to least wanting to be the character of the opposite gender. In a similar regard to the friendship choices, a few of the children discussed their interests being dissimilar to someone of a different gender and therefore would not wish to be that person. For example, one girl stated

that “*he’s a boy and I’m a girl. They like to play boy things*”, while a male participant suggested that girls “*play boring games*”. These examples thus demonstrate a stereotyped understanding of what activities girls and boys engage in based on their gender.

Three of the children discussed fears that they might be teased (“*he is most fatter... some peoples will laugh at me*”) or rejected (“*people might not want to play with you because they might want someone that isn’t in a wheelchair*”) by their peers due to being fat or in a wheelchair. Further, one child, who stated that the fat children are unkind and unhelpful, went on to say that if she was fat “*my friends don’t want to play with me again because they don’t like fat people... If I was fat and you was thin and then you said you don’t want to play with me, that’s not kind is it?*”. Through this she demonstrated both an awareness of stigmatisation and an understanding that it is perhaps not an acceptable way to behave, despite her explicit rejection and negative characterisation of the fat character.

Effect of participant gender

There were very few differences in children’s reasons for self-image and friendship preferences between the male and female participants. Comments from both the boys and girls were identified within both dominant themes, however there was some variation between the frequencies in which the subthemes were elicited. The boys offered more reasons associated with *physical limitations* (Boys N = 15; Girls N = 5) while the girls made more reference to *social* reasons, such as *adherence to social rules* and *negative character associations* (Girls, N = 8; Boys, N = 1). In addition, while both genders made comments regarding the secondary characteristics of the fat character, three of the girls made comments which solely

referred to these (*“because she has her hair down and I like having my hair up better”*). The other three instances were made by one girl and two boys and included additional observations about the characters fatness or size (e.g. *“I don’t like him...because he’s big... they’ve got much bigger shoes”*).

Children’s body size and their attitudes towards fatness

The children’s body size was estimated by the researcher using the seven-point Collins Scale (1991). This was completed with the aim of establishing whether children’s responses regarding the fat character differed depending on their own body size. The vast majority of the children fell within the mid-ranges of the scale; however five children were rated as being at number 1 (i.e. very thin). While none of the children were rated at the highest point of the scale (i.e. very fat), two were rated at number 6.

Due to the small numbers of children at either end of the scale, it was not possible to determine reliably whether there was any relationship between body size and attitudes towards fatness. However, there was an interesting difference in the responses for the two children rated at number 6. Only one identified fatness as the most important difference and as the character they would least like to be. This child additionally gave a fatness related construct for the repetition of the ‘most different’ question, expressed strong anti-fat views and made assertions about the controllability of fatness on two occasions. Conversely, whilst the other child made reference to themselves as being most like the fat character (*“because I’m a bit fat... you eat lots and get unhealthy and you run slow”*), he did not mention weight at any other point.

CHAPTER 4: DISCUSSION

The main aim of this study was to examine how young children perceive fatness in the context of other visible differences, whether children would use fatness as the predominant differentiating characteristic between peers and identify fatness as the most undesirable characteristic in themselves and their friends. It also investigated the reasons that children gave for their rejection of characters with particular visible differences and whether there was any significant variation in the responses given by girls and boys. Consideration was also given to the impact of children's own body weight on their responses.

Repertory grid methodology was used to generate the children's personal constructs, which enabled the direction of the research to be guided by the children themselves. A semi-structured interview and four illustrated characters, which differed on a number of domains, provided children with the opportunity to consider a variety of characteristics, discuss which were most important for them and provide the reasons for their answers.

The study found that children did not use fatness as a primary differentiating characteristic between peers and was no more important a visible difference than gender or disability. They demonstrated a broad 'like-me' preference in their friendship choices and did not show predominantly anti-fat views when considering their actual and ideal self-image. The reasons which children gave regarding friendships rejections and 'least like to be' characteristics were wide ranging and the majority of themes were common between at least two of the three main characters, i.e. fat, wheelchair and opposite gender characters. There were however a few children who identified negative characterisations and beliefs which were reflective

of fat stereotypes in the media, and that are evidenced in first hand reports by people with obesity.

This chapter will discuss these findings in relation to previous research. The clinical implications of this work will be considered, followed by a discussion of the methodological strengths and limitations, and possible directions for future research.

Fatness as the most salient characteristic

The first aim of the study was to explore whether children used fatness as the primary differentiating visible characteristic between peers. This was investigated by firstly seeing which character the children selected as being most different and secondly, by asking what was the difference that had been identified. The results demonstrated that equal proportions of the children thought that the wheelchair, fat and opposite gender characters were most different from the standard character. However, only six of the 29 children who selected the fat character identified constructs related to fatness as the reason for their answer, with the other children discussing differences in hair, clothing and height. This was in contrast to the children who selected the character in the wheelchair and the character of the opposite gender as the majority cited the respective primary differences as the reasons for their answers. Thus, only 7% of the total sample discussed fatness as a construct in comparison to 20% and 27% regarding gender and wheelchair constructs, respectively. Indeed, this pattern of results was also true when responses across all three choice repetitions were examined, with fatness constructs elicited only by a minority of the children. Thus, when presented with a range of visible differences, fatness was rarely identified as the most important difference between peers.

Such findings contrast with previous research, which have concluded that children demonstrate a significant anti-fat bias from the age of 3 years old (e.g. Cramer & Steinwert, 1998; Musher-Eizenman et al, 2004; Wei & Di Santo, 2011) and view fat peers more negatively than peers with other visible differences, such as physical disability (Richardson et al, 1961; Latner & Stunkard, 2003). A key criticism of these studies is that they have been primarily quantitative in nature, utilised forced choice methodologies and have been constrained by existing hypotheses and the preconceived ideas of the researcher. The present findings therefore highlight the importance of how children are asked about their understanding and opinions. The use of the repertory grid permitted children's own personal constructs to be elicited and enabled the inclusion of views which were deemed most important by the children themselves. This allowed for the discovery that visible differences which are typically viewed as '*superficial*' or less important by adults may be a primary discriminator for children, for example, differences in clothing as being more important than fatness.

This result adds a new perspective to previous research findings which have investigated obesity stigma using visual images which differ only along limited domains, for example, thin to fat body size (e.g. Durante et al, 2014) or fatness in comparison to various physical disabilities (e.g. Latner & Stunkard, 2003). As these images provide children with only a limited number of variables on which to identify difference, they increase the likelihood of the children demonstrating negativity towards fatness. The findings additionally support those found by Harrison (2009) and Rowlinson (2011) who concluded that the degree of negativity towards a fat character was influenced by the methodologies used, with forced choice methodologies leading to higher anti-fat attitudes than when rating scales were used.

Thus, the failure to observe a character's fatness as being the most important difference in the present study may have been the result of using the repertory grid, a very different methodology to the forced-choice and story-based tasks which dominate the current literature base.

A possible alternative explanation for the limited identification of fat as a difference could be the presence of social desirability bias, i.e. children may have inhibited their negative attitudes towards fatness due to feeling that this not being socially acceptable behaviour. However, literature suggests that it tends to be older children who are more affected by social and moral conventions than younger children (e.g. Patel & Holub, 2012). For instance, very young children were found to be more likely to express explicit anti-fat attitudes than their older peers (Sagone & De Caroli, 2013; Solbes & Enesco, 2010). Indeed this was found in the pilot study, whereby the two 4 year olds included spoke freely about fatness while two older children (10 years old) tended to list a number of superficial differences before eventually mentioning the body size of the fat character. Thus, it seems unlikely that such a social desirability bias would be able to fully explain this finding.

On the other hand, children who are susceptible to a social desirability bias may be more likely to provide answers that they perceive the researcher to want. This would suggest that if children had made assumptions about the focus of research being about obesity, they would be more likely to refer to fatness in their answers. In the present study, there was no evidence of such bias. This is indicative of a good methodology, in that it was able to disguise the research aims and gain a more rounded understanding of the children's attitudes towards difference.

Difference and diversity in friendship preferences

The second aim of this research was to consider whether young children are less likely to select a peer who is overweight than one in a wheelchair or of the opposite gender when making friendship selections. The results demonstrated that while children were significantly more likely to reject a fat character than one of healthy weight, this was also the case for the other two characters, i.e. children were also more likely to reject the character in a wheelchair and one of the opposite gender than their able-bodied or gender matched counterparts. Thus in a forced choice situation, the children did prefer to be friends with a healthy-weight peer; however rejection of those who were visibly different was not exclusive to fatness.

This finding supports previous research which suggests that, when children are making friendship choices, they prefer to have a friend who is healthy-weight than one who is fat (e.g. Cramer & Steinwert, 1998; Musher-Eizenman et al, 2004) and prefer an able-bodied friend over one with a physical disability (Latner & Stunkard, 2003; Seligman et al, 1986). In addition, the results are concordant with the well evidenced same-gender friendship bias in young children (e.g. Martin & Fabes, 2001). Overall, these findings support the idea that children broadly have a preference for peers who they perceive as being categorically similar to themselves (Fawcett & Markson, 2010), as opposed to a specific overt rejection of fat peers.

The importance of weight in children's actual and preferred self-image

When the children were asked to consider the similarity of their self-image in relation to the presented characters, weight was not cited as a primary discriminating feature. In accordance with the other findings of this study, although 13 children felt

they were most similar to the fat character and 24 felt that they were most different, less than a third mentioned fatness in their reasoning. The remaining children referred to other factors, such as hair and clothing choices, in their reasons for their selection. Likewise, of the large number of children who identified being most similar to the standard character, fatness, or rather “*skinny/thin*”, was mentioned on only six occasions.

With regards to when the children were asked about which character they would most and least like to be, they did not demonstrate more negativity towards the fat character. While 24 of the children selected the fat character as the one they would least like to be; one third of these children did not refer to fatness in the reason for their selection. Additionally, a small number of children actively wanted to be like the fat character due to their secondary appearance characteristics e.g. perceived taller height (“*he’s really big... he can reach really high stuff*”) and lack of wheelchair (“*he’s not got the wheelchair and he has got the same hair*”), which appeared to take precedence over any perceptions of fatness.

Thus, whilst weight was used in some instances to make judgements regarding actual and preferred self-image, it was certainly not the primary differentiating factor for the children. In fact, it was the character of the opposite gender which was identified more often as being most different and the character that the children would least like to be. Indeed, none of the children felt that they were most similar to this character, which is in line with literature on the early identification of one’s own gender and the development of gender constancy from the age of 2 years old (Kohlberg, 1966).

Children's reasons for friend rejection and self-image aversions

Whilst rationales for children's friendship rejections and 'least want to be' selections were varied, there were a number of common themes. Responses were broadly categorised as relating to either physical or social factors. When organised into subthemes, it was clear that the majority of reasons used to reject peers who are fat, in a wheelchair or of the opposite gender overlapped between two or even all three of the constructs. Thus, while there were many reasons given for the rejection of particular characteristics for the children's preferred self-images and in their friendship selections, these were not overwhelmingly directed at fatness. However, the anti-fat responses were very interesting and warrant specific further discussion.

A focus on fat

In line with findings of Rees et al's (2011) systematic review of the literature, when children made reference to fatness, "*thin/skinny*" was viewed positively while fat was consistently framed as being an undesirable characteristic. The children referred to the excess consumption of food ("*it's ate too much*") as being a cause of fatness. This is consistent with research findings that suggests that by age 6, most children have developed an understanding of the relationship between eating and the impact on body size (e.g. Lowes & Tiggeman, 2003; Baxter et al, 2015).

Two participants suggested that this over eating was unnecessary and a result of being "*greedy*". This is in line with the findings in Puhl and Brownell's (2007) review, which concluded that obese individuals were often assumed to be impulsive and lacking in willpower and self-control. The children also discussed the idea that fatness was controllable and therefore the fat peer was to blame for their body size

(e.g. *“no people have to be fat like her... they eat lots of things”*). In concordance with the research of Musher-Eizenman et al (2004) and Tiggeman and Anesbury (2000), this perception of controllability led a few children to view the fat character in a more negative light than the other characters when compared along similar domains. For example, although both the fat and wheelchair characters were sometimes seen as being unable to perform certain physical tasks, the character in the wheelchair was viewed more favourably due to the limited perceived controllability over his ability (*“[fat] can’t run or walk... not fair [wheelchair] can’t run, they’re not allowed to run”*).

An important finding was that amongst a few participants, fatness was perceived negatively due to an understanding that it is unhealthy. However, only some of these children shared ideas about what the potential physical consequences of fatness could be (*“you might pop”; “fat people will die if they get more fatter”*), with others simply suggesting that being unhealthy was undesirable but without an understanding of why this might be the case (*“I don’t want to be unhealthy... because I just don’t like being unhealthy”*). In line with previous findings (e.g. Baxter, Collins & Hill, 2015; Birbeck & Drummond, 2006; Fielden et al, 2011) this suggests that some children from a very young age are receiving information about the negative impact that fatness may have on health and the lifespan. However, their understanding of this information is limited and appears to increase the negative views of overweight peers.

A small number of children additionally discussed their perception of fatness stigmatisation, which is enacted through teasing and social isolation. In accordance with previous findings (e.g. Rees et al, 2011), these children assumed that fat peers

would be laughed at and and/or shunned by their peers. Despite recognition by some that this was “*not funny*” and “*not kind*”, the children continued to reject the fat character. For example, in her reason for least wanting to be like the fat character, one child stated: “*because then my friends don’t want to play with me again... they don’t like fat people... If I was fat and you was thin and then you said you don’t want to play with me that’s not kind is it... they don’t like people who is fat*”. This idea demonstrates the strength of some of these negative associations with fatness. Thus despite describing a moral understanding that social rejection of fat peers is unacceptable, they appeared to view this attitude as the norm and thus unavoidable.

The most commonly cited reason for the undesirability of fatness in peers and in one’s self was the assumption that they would possess limited physical ability. This is an idea that has been frequently found in research looking at the perceptions of adolescents. For instance, in Dixey et al’s focus groups of 9 – 11 year old children, there was the suggestion that fat children were physically inferior than their peers (“*ha ha you’re fat, we’re strong*”, 2001a; “*if you’re fat you can’t run*”, 2001b). In addition, one child in the present study also stereotyped the fat character as being unkind, less helpful and less well behaved. These findings add support to the literature on the negative characterisation of fat peers amongst primary school age children as possessing more undesirable personality traits (e.g. Kirkpatrick & Sanders, 1978; Wei & Di Santo, 2011) and lower physical capabilities (e.g. Penny & Haddock, 2007) than their healthy-weight counterparts. These stereotyped views of fat peers reflect the portrayal of fatness in the media, film and television (e.g. Eisenberg, Carlson-McGuire, Gollust & Neumark-Sztainer, 2015; Fouts & Burggraf, 2000; Greenburg et al., 2003; Herbozo et al., 2004; Robinson, Callister & Jankoski, 2008) and indeed, echo some of the first-hand accounts of those with obesity (e.g.

Neumark-Sztainer et al, 1998; Thomas et al. 2008). However, whilst the content of these anti-fat views were in line with previous findings, it must be born in mind that these were voiced by only a small minority of children whilst the majority demonstrated no overt negativity which was specific towards fatness.

Fat in the context of other differences

As mentioned previously, all but one of the subthemes which were identified with regards to rejection of fatness in friendships and in the self were also raised when discussing a peer in a wheelchair or of the opposite gender. For example, *'physical limitations'* were the most commonly cited reasons for the rejection of a fat peer and as a rationale for the character they would least like to be. However, such limitations were additionally referenced in relation to a peer in a wheelchair and, in a small number of cases, a peer of the opposite gender. Similarly, *'social disapproval'* was also discussed in relation to a child least wanting to be like the character in the wheelchair *"people might not want to play with you because they might want someone who isn't in a wheelchair"*. There were equally themes which arose specifically in relation to the rejection of the character in the wheelchair (*"burden"*) and the character of the opposite gender (*"different interests"*).

The idea that young children broadly base their friendship preferences on categorical similarity was clearly demonstrated in the results. In fact, a number of the children made reference to the idea of 'like-me' friendships as if it was a social rule which must be followed (e.g. *"girls have to play with girls and boys have to play with boys"*). This, in conjunction with the evidence that children did not predominantly reject the fat character, suggests that children reject peers who are 'not-like-me' along a domain deemed important to them. Due to the tendency to

focus one particular type of visual difference and the use of quantitative, forced-choice methodologies, such commonalities between negative stereotypes and attributes directed towards a variety of visible differences are rarely investigated in the literature. This is an important finding as it suggests that, while there is evidence of a number of negative attitudes and stereotypes amongst young children, these are not overwhelmingly directed at fatness. It is therefore likely that negativity towards fatness within this age-group has been previously overstated in the literature. This may be due to the nature of the research methods employed.

Gender differences and body size in children's attitudes towards fatness

In line with the findings by Baxter et al. (2015), very few differences were noted in attitudes towards fatness between the male and female participants. There were no differences between the frequency of selection of the fat character in relation to being most different or as being most or least desirable to be like. When looking at the reasons provided by the children, both genders held broadly the same attitudes and understandings towards fatness, however there was some variation in the number of comments provided within each of the dominant themes. Specifically, there was more of a focus on the limitations with regards to physical ability by the boys. This is perhaps unsurprising as boys of this age have been consistently found to be more active in their types of play than girls (Fabes et al., 2003; Martin et al, 2013). In addition, the girls provided more comments in relation to the dominant *social* theme, with regards to adhering to social rules and wishing to avoid the fat character due to negative associated characterisations. This supports the idea that at this age girls tend to engage in more cooperative play, with a focus on promoting and maintaining harmony within the group (Maccoby, 1990).

While both genders made comments in relation to the appearance of the fat character, three of the girls offered reasons which did not refer at all to fatness or size. For example, three girls described least wanting to be the fat character due to the colours she was wearing and her hair style. This adds new evidence to those studies which have identified that young females tend to focus more on body image than their male counterparts, with the idea that at this age, girls focus broadly on different aspects of appearance and not just weight. This is a finding which has been lost in studies which have utilised black and white line drawings (e.g. Wei & Di Santo, 2011) or figures which vary only by weight (e.g. Musher-Eizenman et al, 2004).

Due to only two participating children being rated as overweight, it was not possible to systematically relate body weight to children's responses. However, it was interesting to note that one of the overweight children demonstrated very clear anti-fat views throughout the task, without mentioning their own body size. In contrast, the other child mentioned fatness only once and this was in relation to their similarity to the fat character. There has been limited research into this topic; however in those few studies children's actual body size has a limited (Hill & Silver, 1995) or no impact on children's anti-fat attitudes (Cramer & Steinwert, 1998; Davison & Birch, 2004; Holub, 2008; Kornilaki, 2015). It would be interesting to investigate this relationship further using open-question methodology with young children of a larger range of body sizes.

Strengths and limitations of the present study

Strengths

A major strength of this study is that it has shown the ability of very young children to engage meaningfully in qualitative research, provide detailed answers to open ended questions and justify their responses. The dyadic elicitation repertory grid is a method which has not been used in research with this age group, but has been utilised usefully in clinical work (Butler & Green, 2007; Fransella & Bannister, 1977). This approach provided a clear and simple framework within which to structure the interviews and is easily replicable for future research. This adds evidence to the growing literature base that young children can engage in qualitative research and articulate their beliefs and attitudes when appropriate adjustments are made to the methodology to support their developmental level.

Importantly, this technique allowed the direction of the study to be guided by the child, rather than constrained by any preconceived assumptions by the researcher. This enabled the discovery that children place importance on a wide variety of visible differences, a finding which has previously gone undetected due to the tendency to focus obesity research purely on weight. It also allowed for the expression of very specific anti-fat attitudes by the few children who held them, and place them within the broader context of negative attitudes towards other 'not-like-me' visible differences.

The characters used were specifically designed to be actively engaging for young children, while previous research has often utilised comparatively crude materials. In addition, the characters varied on a number of 'secondary' domains

(e.g. colour and style of hair and clothing, facial features, skin colour) in addition to the 'primary' differences of interest in the study. This allowed the materials to be more representative of the dimensions of visible difference that would be encountered in peers and therefore more ecologically valid than materials used in other studies which have limited variation between characters.

Limitations

One of the limitations of the present study was that the collection of data regarding the children's body sizes was completed using an estimation of size by the researcher using the Collins scale, as opposed to taking actual anthropometric measurements. Accurately recording the body size of each child would have involved weighing and measuring them, which can be intrusive, may have made the children feel uncomfortable and may have deterred parents from consenting. Furthermore, it could have given an indication as to the primary focus of the study. Thus if measurements were taken before the task or if the children talked about the task requirements with those yet to take part, it may have influenced their answers. Conversely if they were taken afterwards, the children may have felt they had completed the task incorrectly. However, while using the researcher's estimations resolved some of these issues, the reliability and accuracy of these estimates has not been assessed.

Another potential limitation comes from the use of opportunity sampling. All of the children came from two primary schools in Leeds, England, which may limit generalisability of results outside of this city. However, the sample collected was diverse in terms of ethnicity and included almost equal numbers of boys and girls. In addition, although the socio-economic status of the children was not recorded, a

factor shown to be correlated with perceptions of obesity (Public Health England, 2015), effort was made to recruit participants from primary schools based in two geographical areas associated with different levels of affluence. Although it would have been interesting to investigate, it was beyond the scope of the study to examine whether there were any differences between the two schools and/or pupils of different ethnicities.

Finally, although the study utilised a relatively large sample for this type of investigation, the overall consent rate was approximately 23%, which is less than gained in previous thesis research (e.g. Baxter et al, 2015; Rowlinson, 2011), though was comparable to some of the few relevant studies to report rates of consent (Musher-Eizenman et al, 2004; Nabors & Larson, 2002). It is therefore possible that non-participating children held different attitudes or even that parents of children with strong negative views about differences may not have consented for this reason. It would therefore be interesting to see whether these research findings are replicated in future studies.

Recommendations for future research

As mentioned above, a strength of this research is its adaptability. It would be possible to replicate this study using different representations of people to incorporate a wider range of visible differences as investigated in previous studies, for example, craniofacial abnormalities (Broder, Smith, & Strauss, 2001) or race (Aboud, 1988). In addition, it would be interesting to investigate the developmental nature of these character choices by comparing children at different ages. This method could be easily used with older children to see how their answers compare and could also potentially be simplified to see whether it can be used with an even

younger age group, for example, by reducing the number of elements in the grid and number of constructs to be elicited.

The present study has found some very interesting findings regarding expressed negative views by a minority of young children with regards to their visibly different peers. However, researchers have found that expression of attitudes and beliefs are not always concordant with behavioural intentions in young children (Kraig & Keel, 2001; Musher-Eizenmann et al, 2004). Thus, while some of the children may demonstrate stigmatising attitudes, it is not known whether this would be enacted in their social interactions. In future research, it may be beneficial to incorporate additional measures of friendship choices within their own peer groups. One possible means of conducting this would be naturalistic observation of children's interactions during free play at school, for example, noting whether the children who are overweight are included in play as much as their healthy-weight peers. However, this would be time consuming and potentially very complex depending on the number of children involved. A simpler alternative could be the use of sociometric tools, which are well-established quantitative measures of interpersonal relationships. For example, the Social Inclusion Survey (Frederickson & Graham 1999) is a forced choice tool which asks children to go through their class register and rate how much they like to play with each child. The results from every pupil in the class are analysed together and this allows for the identification of social inclusion between peers, specifically social rejection and acceptance, and mutual friendships in each class.

In addition, it would be interesting to investigate how the specific anti-fat views have developed. It has been suggested that the media, peers and parents may play contributing roles in the development of children's attitudes towards difference

in their peers (Hayes & Tantleff-Dunn, 2010), however, research in this area has been limited and warrants further exploration (Latner & Schwartz, 2005). While this was not a direct area of exploration, a few children offered up suggestions of what had influenced their opinions. For example, one child stated that *“my mum says that if you’re fat, you fall”*, while another repeated a story from his father about an overweight friend being laughed at by colleagues. Thus, it would be helpful to consider children’s attitudes in relation to their social environments, both at home and in school.

Of note, in the present study none of the children who participated had a wheelchair using pupil in their class, and therefore it was unclear how many of these children had previous direct contact with someone with a disability. In line with Allport’s (1954) contact hypothesis, it would be interesting to see whether this would affect children’s perceptions of the wheelchair character. Indeed, one participating child in the study spoke positively of wheelchair users due to her experiences of riding on the back of her grandmother’s chair. It would also be of interest to know how many overweight pupils each school had to see whether this affects children’s anti-fat attitudes.

Practical implications

The results of this study have practical implication for adults who work with children. By allowing the children to lead the direction of research, it was clear that children see the world differently from adults and have different understandings and priorities. This could be used to shape adult-child interactions and education initiatives around acceptance of diversity. For example, there has been suggestions that school based interventions promoting body size acceptance should be

implemented, and this should begin at an early age (e.g. Puhl & Latner, 2007; Latner & Stunkard, 2003; Smolak, Levine & Schermer, 1998; Irving, 2000). However, the results of this study suggest that this age group have a limited focus on fatness when in the context of other differences and have significantly less negative anti-fat attitudes than have previously been suggested. Therefore, caution must be taken in implementing such early intervention initiatives as they may in fact serve to focus attention on body size and difference, potentially leading to an increase in stigmatisation.

Thus, it seems more appropriate to focus attention on obesity reduction through national public health initiatives (e.g. Change4Life) aimed at increasing healthy lifestyles through educating parents and older children, and implementing healthy eating and exercise programmes in schools, rather than directly educating those of very young age. The results of this study suggest that amongst this age group, children are receptive to ideas around food intake and the impact on weight. However their limited understanding led to increased control attributions and blame directed towards the fat character. A review of obesity prevention schemes carried out with children under the age of five found limited effectiveness when interventions to promote activity and exercise were carried out in the pre-school environment. They suggested that parental involvement may be a vital component for observable and lasting change with regards to health promoting behaviour (Hesketh & Campbell, 2012).

Although in the minority, it is worth considering how the children holding strong anti-fat views may have an influence on the majority. If other children hear these views and perpetuate them, this could substantially increase the risk of bullying and social isolation of peers who are overweight. Thus, while it is perhaps counterintuitive to use body size acceptance interventions for the whole class, it is

important that these minority views are directly tackled. Thus, school staff should challenge any expression of negative views of fatness by the pupils, whether this is in the form of direct verbal teasing or indirect comments about weight. More generally, schools should recognise and respond to any incident of bullying in line with their own school policies. Teachers should be responsible for sending the message to children that bullying is not acceptable behaviour and will not be tolerated, in addition to promoting pro-social behaviour between peers where possible.

Conclusions

This study aimed to investigate young children's attitudes towards obesity in the context of other visible differences. An important finding was that children of age 4 to 6 were able to meaningfully engage in qualitative research and clearly conveyed their beliefs and understandings. The repertory grid methodology allowed for the finding that children do not demonstrate a primary negative attitude towards fatness but rather use a range of visual cues in their friendship selections and preferred self-image, with a broad preference for categorical similarity.

While a minority of the 85 children expressed anti-fat attitudes, many of the themes elicited in relation to the rejection of the fat character, such as *physical limitations*, *social disapproval* and *negative character associations*, were also raised in respect to the other characters and were therefore not anti-fat specific. This finding suggests that negativity towards fatness amongst this age group is far less than has been concluded in previous research. This study has therefore demonstrated the utility of the personal construct approach and the importance of allowing research to be guided by the child, rather than constrained by preconceived assumptions by the researcher.

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APPENDICES**Appendix 1: School participation letter**

Charles Thackrah Building
University of Leeds
101 Clarendon Road
Leeds
LS2 9LJ
0113 3430815
umjch@leeds.ac.uk

[Date]

[Address 1]
[Address 2]
[Address 3]
[Postcode]
[Date]

Dear [Head Teacher],

I am a graduate psychologist currently working on my Doctorate in Clinical Psychology at the University of Leeds. As part of the training, I am completing my research thesis which explores *Young children's perceptions of visible differences*. More specifically, I shall be looking at the ways in which 5 – 7 year old children notice and understand physical differences between their peers. I was wondering about the possibility of undertaking part of this project with children in your school. A summary of the proposed study protocol can be found overleaf.

I have conducted a number of pilot trials of the interview and feedback from the children has been positive, reporting that they found it to be an enjoyable experience. I am hoping to include children from around six Primary schools and would be most grateful for the opportunity to discuss the study further with you. I shall ring you within the next two weeks to ask whether it would be possible to make an appointment to meet with you. Alternatively, please contact me via email on umjch@leeds.ac.uk or my supervisor, Professor Andrew Hill, on the above telephone number or address.

Yours sincerely,

Jo Charsley
Psychologist in Clinical Training

Summary of research study protocol

Parents of children in Reception and Year One will be provided with an information leaflet about the study and a consent form. A convenient day will be arranged for me to come in and spend approximately 10 minutes individually with each child whose parents had provided consent. The interviews will ideally take place in a quiet area of the classroom or school and be recorded on an encrypted digital voice recorder. During this time, the child would be shown four cartoon illustrations of children and be asked questions about any differences that they perceive. They will also be asked questions to elicit which qualities they find preferable in a friend and how they view themselves in relation to the different characters. Some basic demographic details will also be noted about each child and all results shall be kept anonymous and confidential.

Appendix 2: Letter to parents/guardians

Charles Thackrah Building
 University of Leeds
 101 Clarendon Road
 Leeds
 LS2 9LJ
 0113 3430815
umjch@leeds.ac.uk
 [Date]

Dear Parent/Guardian,

Who am I?

My name is Joanna Charsley and I am a Doctoral degree student studying Clinical Psychology at the University of Leeds. As part of my degree, I am conducting a research study which looks at young children's understanding of visible differences in others. I have spoken with your child's Head Teacher and they have kindly agreed for the school to help me with my research and gave me permission to contact you.

Why am I writing to you?

For my study, I shall be asking young children in Reception and Year 1 about their opinions and understanding of visible differences. I hope to include over 100 children from primary schools in West Yorkshire in this study. I am writing to you to ask for your permission for your child to take part.

How would my child be involved?

I will check that your child is happy to have a chat with me and explain what we shall be doing. I will let them know that I shall be asking them some questions as I am interested in what they think, but there are no right or wrong answers. If they agree to take part, I shall then show them four cartoon pictures of children, such as the character on the right:



The four characters look different in a number of ways, including their gender, physical ability, body shape, hair colour and clothing. I will ask your child questions about what differences they notice, whether these differences are important and why. I will also ask some questions about their friendship preferences and which of the four characters they think they are most similar and different to. This task should take about 10 minutes.

What else is involved?

To help me write up my research I will be voice recording each interview. These tapes will be anonymised (i.e. your child's name will not be on the tape) and shall be secured so that only my research supervisors and I will be able to listen to it. I will also need to note your child's gender and age and a very brief description of their

physical appearance. All data from the study will be kept anonymous and confidential. After the task has been completed, if you decide you do not want your child's data to be included in the study, you can contact me and request for it to be withdrawn without providing a reason.

Where and when will the study take place?

The study will take place during a normal school day in term time. I will arrange a day with your child's teacher to come in. I shall speak to each child taking part in a quiet area of the classroom or school with a member of school staff present at all times.

What if I agree but my child does not want to take part?

Your child will only take part if they are happy to do so. I will first make sure they are comfortable talking to me and let them know that we can stop the task at any time if they change their mind. If they do not want to take part or wish to stop the task, they will return to their class and continue with their usual lesson.

Are there any benefits for my child to take part?

The task is designed to be fun! Children who took part in an initial trial have all reported that they enjoyed it. Your child will get to spend some one to one time with a friendly researcher and will be given a sticker at the end of the task as a thank you.

How do I let you know whether I agree?

I have attached a permission slip with this letter. Please could you complete this slip and return it to your child's teacher as soon as possible.

I have some more questions, how do I contact you?

I am more than happy to answer any further questions you might have about the study. You can contact me on the email address or telephone number at the top of this letter.

I really appreciate you taking the time to read this information letter.

With many thanks,



Joanna Charsley

Psychologist in Clinical Training

Appendix 3: Consent form

Young Children’s Perception of Visible Differences

Consent form

- I have received and understood the information provided
- I understand that my child’s participation is voluntary
- I understand that my children’s answers will remain anonymous and confidential
- I understand that I am free to withdraw them from the study prior to the data being analysed, without giving any reason
- I agree to my child’s responses being audio recorded
- I agree that anonymised extracts of my child’s responses can be used in the write up of the study
- I agree for my child to take part in the above study

Please circle as appropriate:

I *do* / *do not* agree to all of the above statements

Name of child

Name of parent / guardian.....

Relationship to child.....

Signed.....

Date.....

Please return this form to your child’s teacher by [*agreed date*].

With many thanks.

Appendix 4: Confirmation of ethical approval



UNIVERSITY OF LEEDS

**Faculty of Medicine and Health Research Office
School of Medicine Research Ethics Committee (SoMREC)**

Room 10.111b, level 10
Worsley Building
Clarendon Way
Leeds, LS2 9NL
United Kingdom

☎ +44 (0) 113 343 1642

08 July 2015

Miss Joanne Charsley
Psychologist in Clinical Training
Leeds Institute of Health Sciences
Faculty of Medicine and Health
Charles Thackrah Building
Clarendon Road
LEEDS LS2 9LJ

Dear Jo

Ref no: **SoMREC/14/075**

Title: **Young children's perceptions of peer obesity in the context of other visible differences**

Your research application has been reviewed by the School of Medicine Ethics Committee (SoMREC) and we can confirm that ethics approval is granted based on the documentation received at the date of this letter:

<i>Document</i>	<i>Version</i>	<i>Date Submitted</i>
Ethics Application Form	3.2	03/06/2015
Appendix 1 – Protocol for Gaining Assent From Children	1.0	03/06/2015
Appendix 2 – School Participation Letter	1.1	02/07/2015
Appendix 3 – Letter to Parents/Guardians	1.0	03/06/2015
Appendix 4 – Consent Form	1.1	03/06/2015
Fieldwork Risk Assessment Form	1.0	02/07/2015

Please notify the committee if you intend to make any amendments to the original research ethics application or documentation. All changes must receive ethics approval prior to implementation. Please contact the Faculty Research Ethics Administrator for further information (fmhuniethics@leeds.ac.uk)

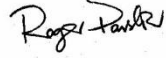
Ethics approval does not infer you have the right of access to any member of staff or student or documents and the premises of the University of Leeds. Nor does it imply any right of access to the premises of any other organisation, including clinical areas. The committee takes no responsibility for you gaining access to staff, students and/or premises prior to, during or following your research activities.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited.

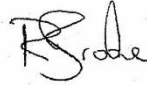
It is our policy to remind everyone that it is your responsibility to comply with Health and Safety, Data Protection and any other legal and/or professional guidelines there may be.

We wish you every success with the project.

Yours sincerely



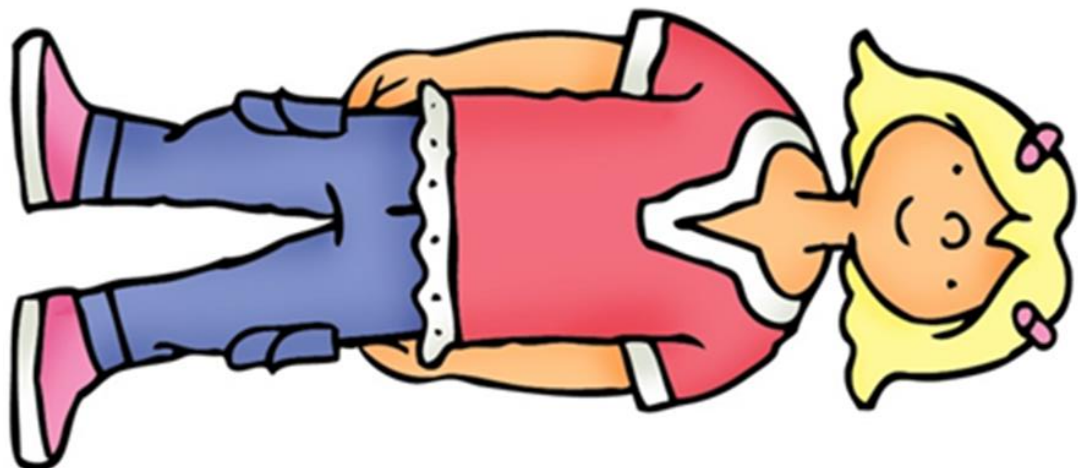
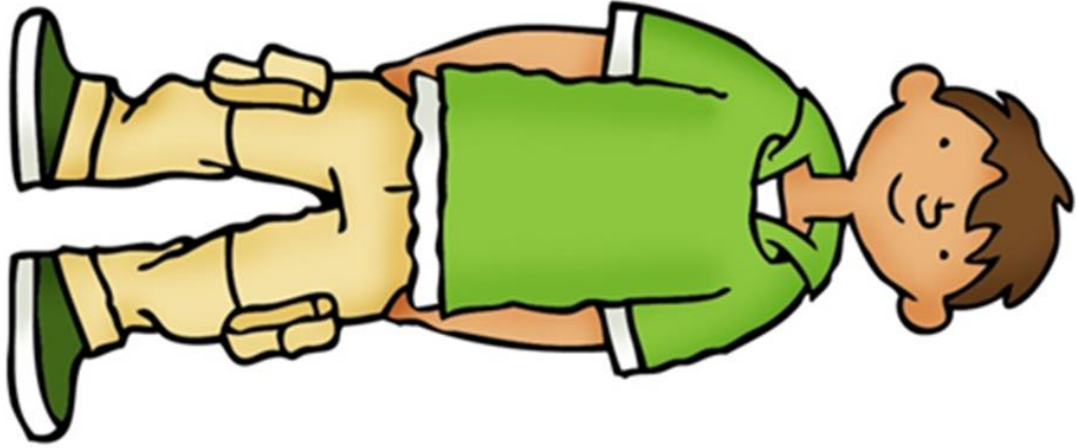
Dr Roger Parslow
Co-Chair, SoMREC, University of Leeds

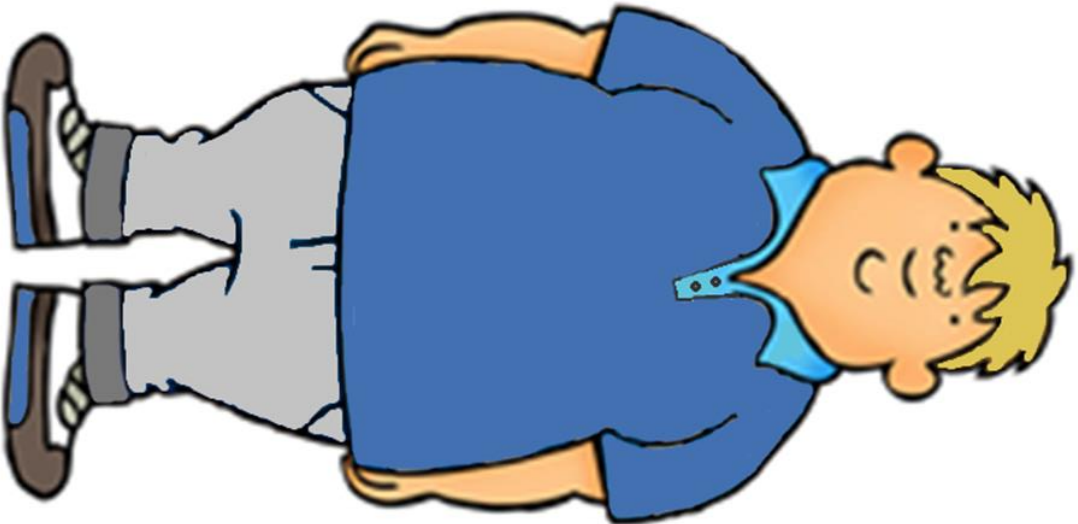


Dr Ruth Brooke
Co-Chair, SoMREC, University of Leeds

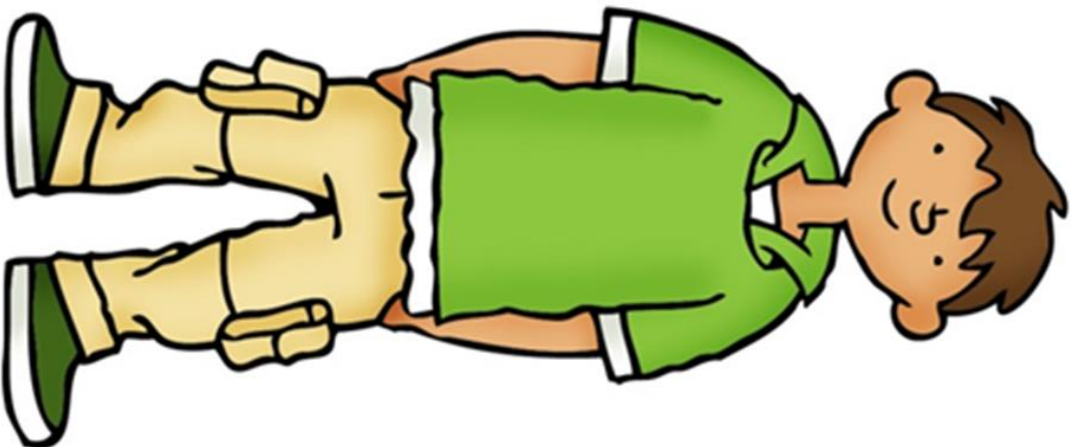
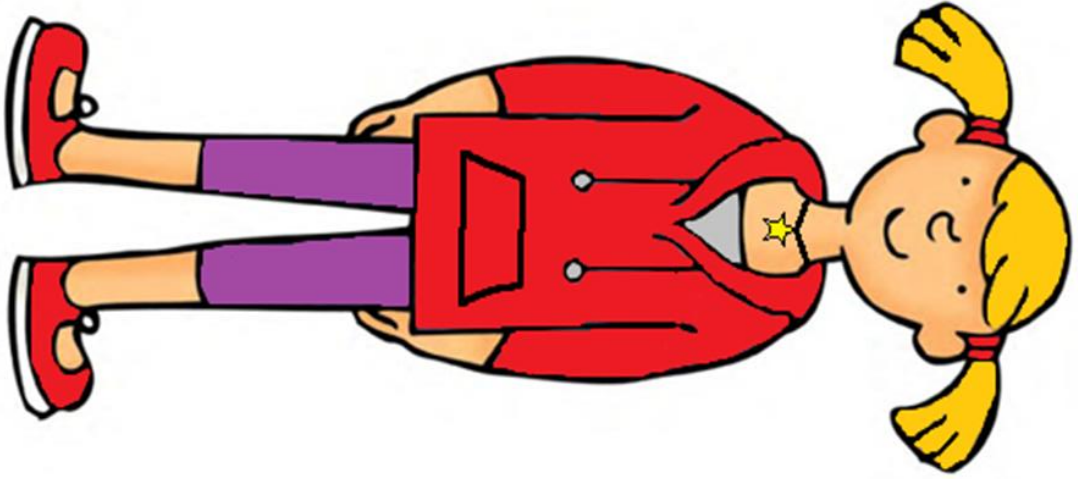
(Approval granted by Co-Chair Dr Ruth Brooke on behalf of committee)

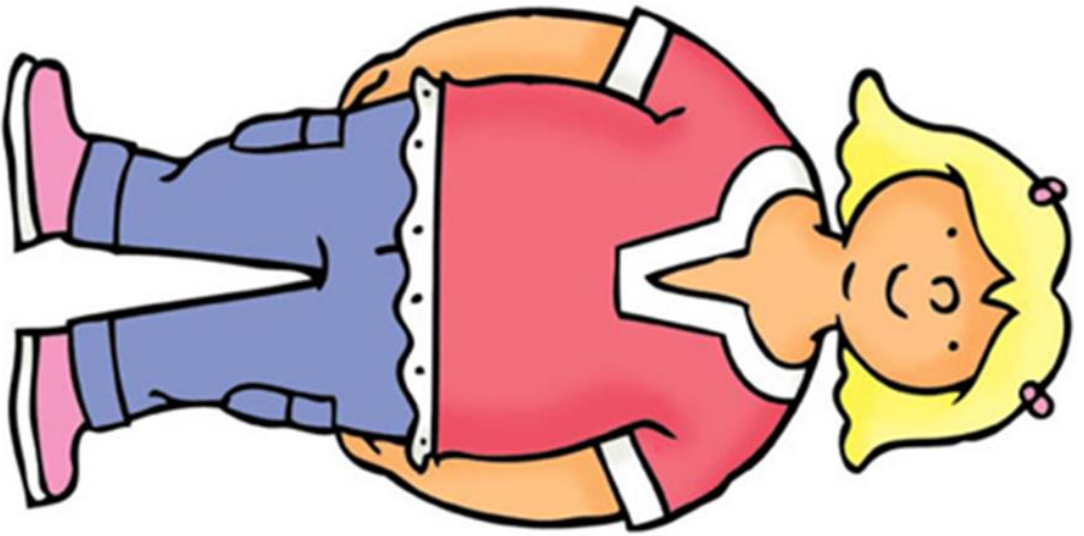
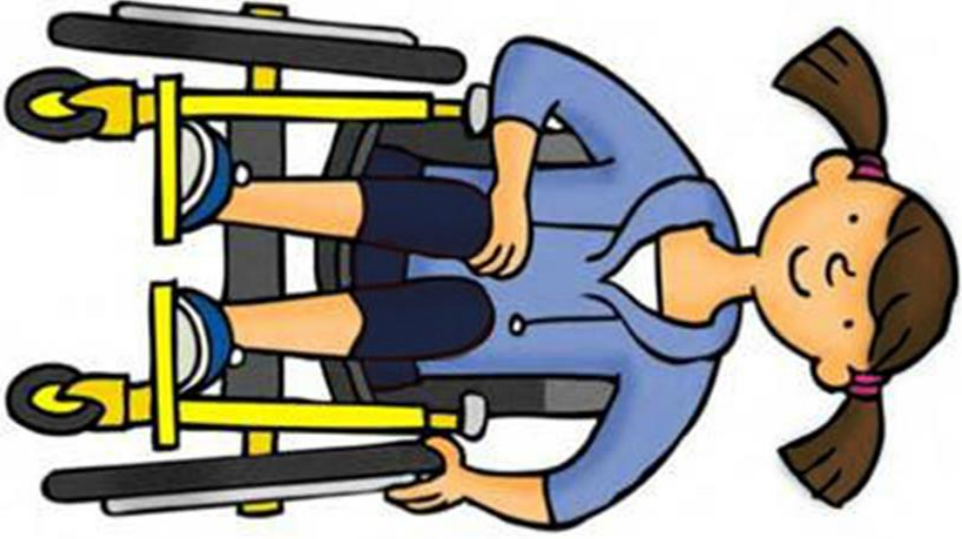
Appendix 5: Character set for male participants





Appendix 6: Character set for female participants







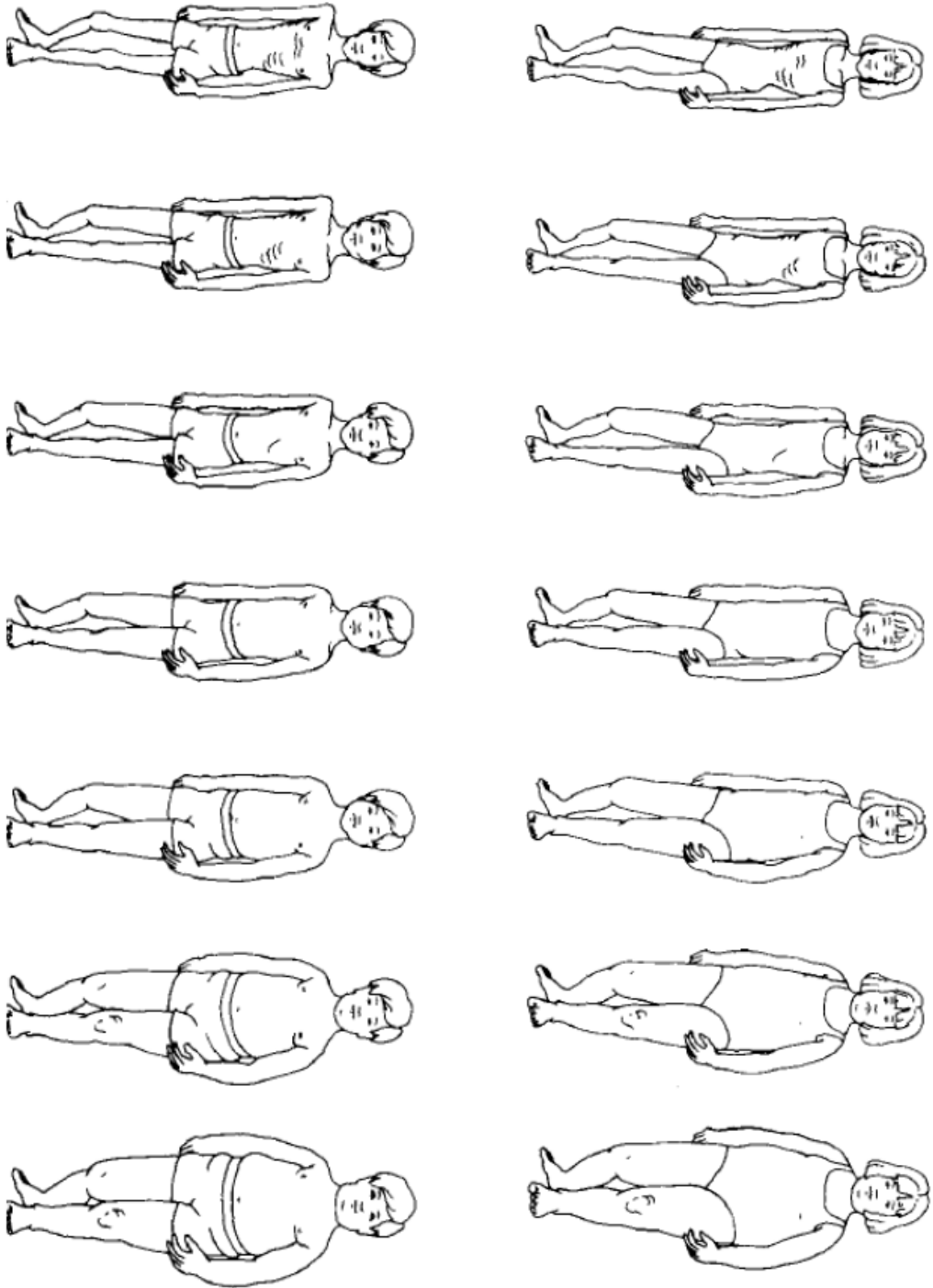
Appendix 7: “You” card

You

Appendix 8: Repertory grid for male participants

						You	
Most similar to...							
Most different to...							
Would most like to be like...							
Would least like to be like...							

Appendix 10: Collins scale (1991)



Appendix 11: Protocol for gaining assent from children who have parental consent

“Hello, my name is Jo. I would like to show you some pictures of four different children and ask you some questions about them. Is that okay?”

There are no right or wrong answers; I am just interested in what you think about these children. You don't have to answer any of the questions if you don't want to. Is that okay?

I would also like to record our chat in case I forget anything later. I will be the only person who will listen to it. Does this sound ok?”

Appendix 12: Interview schedule

Part 1

“Here are pictures of four children who are the same age”

“Please pick the picture of the child that you think is most different to this one?”

“What is most different between these two pictures?”

If the child provides more than one difference, ask “which is the most important difference?”

If the child only gives one word to identify the difference e.g. “he’s big”, ask “What is the opposite of big?”

“Would you prefer to be friends with a child who is [construct 1] or [construct 2]?”

“Why would you rather be friends with that child?”

Part 2

“Please pick a child who looks different to this one but not because they are [researcher says first difference identified]?”

“What is most different between these two pictures?”

“Would you prefer to be friends with a child who is [construct 1] or [construct 2]?”

“Why would you rather be friends with that child?”

Part 3

“Please pick a child who looks different to this one but not because they are [first difference identified] or [second difference identified]?”

“What is most different between these two pictures?”

“Would you prefer to be friends with a child who is [construct 1] or [construct 2]?”

“Why would you rather be friends with that child?”

Part 4

“This card is meant to be you. Please pick the picture of the child who you think is most similar to you?”

“Why did you pick that one?”

“Please pick the child who you think is most different to you?”

“Why did you pick that one?”

“I want you to pretend that I have a magic wand and I am going to turn you into one of these children. Which one would you most like me to turn you into?”

“Why did you pick that one?”

“Now I’m going to wave my magic wand again, but this time you need to pick the child you least want me to turn you into. Which child would you least like me to turn you into?”

“Why did you pick that one?”

Additional guidance

- If the child responds “*I don’t know*”, give an additional prompt to encourage an answer. If the child is still unable to provide an answer, move onto the next question.
- If the child does not understand the question, reword as necessary e.g. change “similar” to “like”.
- If the child’s wording is ambiguous, e.g. “*big*”, check their meaning, for example, do they mean “*fat*”, “*tall*”, “*older*” etc.