

Children's attitudes and friendship behaviours towards socially stigmatised appearances: Do attitudes vary according to type of difference?

Abstract

Appearance-based stereotyping and stigma emerge in early childhood and can exist by the age of 4 years. Children from stigmatised groups (e.g., higher weight, visible difference) are at increased risk of experiencing judgment and unwanted behaviours (e.g., teasing) from other children, resulting in negative outcomes such as poorer psychological adjustment and quality of life. To understand appearance stigma in children further, this study evaluated children's attitudes towards various socially stigmatised appearances. Three hundred and ninety-six children (aged 4-10 years, 54% female, 83% White), from six primary schools in England viewed, in a randomised order, five digitally designed, realistic child characters. The images included characters with: no stigmatised appearance; wearing glasses; of higher weight; with a facial burn, and in a wheelchair. Measures assessed children's attitudes and possible friendship behaviours towards the individual characters. Children had significantly less positive attitudes and friendship behaviours towards the higher weight character and character with a facial burn compared to the characters with no stigmatised appearance, wearing glasses and in a wheelchair (p 's < .05). Additionally, children were least likely to choose the higher weight character as a best friend, followed by the character with a facial burn. Findings can help to inform future interventions designed to promote acceptance of socially stigmatised appearances in young children. These preliminary findings suggest stigma reduction efforts in young children are warranted.

Keywords: children; stigma; appearance; visible difference; weight stigma

Introduction

Appearance-based stereotypes are a set of generalised beliefs related to appearance. A socially stigmatised appearance refers to an appearance that significantly deviates from society's 'standard' and socially favourable characteristics (e.g., able-bodied, lower weight). Research suggests children with particular socially stigmatised appearances are at a greater risk of experiencing appearance-based stigma, such as teasing and bullying (e.g., for stigmatisation towards individuals with burn scars see, Lawrence, Rosenberg, Mason & Fauerbach, 2011, for weight stigma see, Puhl & King, 2013). This can negatively impact children's self-esteem, academic attainment (Kish & Lansdown, 2000), body image (Rumsey & Harcourt, 2004) and overall quality of life (Masnari, Schiestel, Weibel, Wuttke & Landolt, 2013). In order to truly understand the experience of individuals with a socially stigmatised appearance it is necessary to review key literature on visible difference and weight stigma in young children.

Stereotyping and prejudice related to appearance emerges in the early stages of child development and can exist by the age of 4 years (Bigler & Liben, 2007). In most western cultures, the stereotype that 'beauty is good,' meaning those who are viewed as more attractive are also attributed more positive characteristics, is evident from 3 years of age from children's preferred playmate choices (Dion, 1973). Earlier research by Richardson, Goodman, Hastorf and Dornbusch (1961) compared children's attitudes towards various socially stigmatised appearances (e.g., having an amputation, being higher weight, having a wheelchair or having a facial difference, with a cleft lip as the representation of a facial difference). A facial difference is a form of visible difference which is visible to others and hard to conceal and can be a result of an appearance altering condition or an acquired injury (Rumsey & Harcourt, 2012). Richardson et al. (1961), found children with higher weight and those with a visible facial difference were the least preferred appearances. To add to this,

more recent research indicates children are also less likely to attribute positive friendship behaviours (e.g., have friends/be their friend) towards those with facial differences (Masnari et al., 2013) and of higher weight (Dohnt & Tiggemann, 2008; Harrison, Rowlinson & Hill, 2016). However, later replication of Richardson et al.'s (1961) study by Latner and Stunkard (2003) found greater acceptance towards facial differences and a decrease in acceptance towards higher weight. These disparate findings may be indicative of changes in attitudes towards stigmatised appearances over time, or could be a reflection of a different participatory sample.

Furthermore, as well as research in this area being dated (Dion, 1973; Richardson et al., 1961; Sigelman, Thomas & Whitworth, 1986), studies often only compare a small number of socially stigmatised groups, for example; weight bias (Cramer & Steinwert, 1998), weight and disability bias (Harrison et al., 2016), and stigma towards facial differences (Masnari et al., 2013). Notably, one recent study by Charsley, Collins, & Hill (2018) compared young children's (aged 4-7 years) perceptions (e.g., whether they would reject someone as a friend) towards characters who were a 'typical' weight, higher weight, opposite gender and in a wheelchair. The findings highlight children were more likely to reject the opposite gender character than to reject the character of higher weight. The authors conclude that children's negativity towards higher weight is perhaps overinflated by failure to consider other socially stigmatised appearances (Charsley et al., 2018). Collectively, these studies are a useful addition to the research regarding children's stigma towards various appearances. However, the inconsistent conclusions highlight a clear need to further evaluate children's attitudes towards a range of socially stigmatised appearances.

The risk of stigmatisation from others is an important concern of children with an appearance that significantly deviates from the 'norm.' Appearance is identified as an important component of stigma, with aesthetics (i.e., others reactions to the stigma) and

concealability (i.e., the extent to which a stigma is visible to others) outlined as key theoretical dimensions (Jones et al., 1984). Historically, research regarding appearance-based stigma has predominantly taken a medical model approach, focusing mainly on negative effects and reducing psychological distress for the stigmatised individual (Rumsey & Harcourt, 2004). The medical model of disability tends to focus on the individual who is in some way 'different', however the social model suggests that the problem of socially stigmatised appearances is situated within the attitudes of others. The challenge of employing a medical model is it perhaps over-emphasises the affected persons appearance difference, thereby highlighting others homogeneity (Rumsey & Harcourt, 2007). Therefore, the focus on promoting acceptance towards stigmatised appearances in others can provide a more helpful and less pathologizing approach. Although some interventions aiming to tackle appearance stigma in young children have successfully utilised a social model (e.g., Damiano, Yager, McLean & Paxton, 2018; Irving, 2000), there remains plenty of scope for more. This is an important avenue for appearance-stigma research, as most interventions regarding stigmatised appearances focus on changing one's appearance (e.g., weight loss programs), increasing psychosocial factors such as self-esteem and/or reducing appearance related distress for the stigmatised individual. However, a systematic review by Norman and Moss (2015) evaluating the efficacy of psychosocial interventions for adults with visible differences resulting from a variety of appearance-altering conditions and injuries provided very limited support for these interventions. Lack of support was arguably due to a small number of randomised control trials and highlighted a greater need for studies with increased methodological validity. This is further supported in a systematic review published in the same year by Jenkinson, Williamson, Byron-Daniel and Moss (2015), who also found inconclusive findings to support psychosocial interventions, but this time for young people (aged less than 18 years) with visible differences. This may be because interventions

targeting those affected are unlikely to change social environments and appearance-based stigma from others. Therefore, it is important to develop social interventions that target the attitudes of all children, not only children who have a stigmatised appearance. However, prior to intervention development, a clearer understanding of the prevalence and development of children's attitudes towards various stigmatised appearances is required.

Investigating children's first impressions of other children with various appearances is important for many reasons. Firstly, it could help arm individuals who have a stigmatised appearance with strategies and support to cope with stigma. Secondly, it may provide a deeper understanding of possible behaviours and subsequent interactions from those without a stigmatised appearance towards those who do have a socially stigmatised appearance. Lastly, understanding the development and extent of stigma in children may help to inform interventions and educational programs that aim to reduce stigma in this age group.

Therefore, the main aim of the present study was to investigate whether attitudes and friendship behaviours differ towards various socially stigmatised appearances in children aged 4-10 years. The study hypothesised a character without a stigmatised appearance would receive the most positive attitudes and friendship behaviours. Additionally, a higher weight character would have fewer positive attitudes and friendship behaviours attributed to it compared to the other characters.

Method

Participants

Participants were 396 children (212 female and 184 male), from six primary schools located in a city in the South West of England. Primary schooling in England includes children aged four to 11 years (Riggall & Sharp, 2008). Participant age ranged from 4 to 10 years (UK school years: reception to year 5), with a mean age of 6.86 years ($SD = 1.75$).

Researchers reported that the majority of participants were White (83%), with the remainder of participants being described as mixed race (7%), Black (3%), Asian (3%) and other/missing (4%). Using the child 7-point figure rating scale (Collins, 1991), researchers reported that the majority of participants had an average body size ($M = 3.80$, $SD = .73$).

Materials and Procedure

Appearance stimuli. Stimulus material consisted of five digitally designed, realistic characters; all matched according to various features (e.g., face shape, height, race, hair colour and eyes). The character named Alex, with no stigmatised appearance, was the first character designed. Alex depicts a young, Caucasian, schoolchild. The other characters: Jesse (wearing glasses), Sam (higher weight), Ashley (with facial burn scarring), and Jamie (in a wheelchair) were created by adding the diverse appearance feature(s) to the image of the originally designed character, Alex. Characters were designed to represent important socially stigmatised groups previously outlined. The inclusion of the no stigmatised appearance acted as a control and the glasses wearing character defined a physical feature that is not normally viewed as stigmatised (Sigelman et al., 1986), however it is of interest related to its deviance from the relative 'appearance norm.' All characters were created in both male and female form and included a face profile and full body image. The characters were designed to represent schoolchildren who were of a similar age to the participants in the study. All five characters had different gender-neutral names, which were presented along with both the face and full body images (see Figure 1 for example characters).

The study used opportunity sampling for the recruitment of schools, as this is the most convenient approach considering schools can be hard to recruit and require support and permission from school staff at different levels of the school system (Bartlett, Wright, Olarinde, Holmes, Beamon & Wallace, 2017). Recruitment emails were sent to sixty-five schools, of which six schools said they would like to take part, seven could not take part for

reasons such as other commitments and changing of staff, and fifty-two did not respond.

Upon agreement with each school, parents/caregivers of children aged 4 – 10 years received a parental consent letter. Parents were required to provide active consent permitting their child to take part in the study. Approximately 22% of parents who received a consent letter provided active consent for their child to participate, a response rate similar to other studies using active consent (e.g., Shaw, Cross, Thomas & Zubrick, 2015). Upon parental consent, information was given to the children in age-appropriate language, explaining that their participation was voluntary, confidential and they were free to withdraw at any time, without reason. Participants were required to provide willingness to participate through informed assent prior to accessing the questionnaires. Given early evidence indicates children as young as 30 months are able to recognise male and female sexes, as well as identify which category they are more similar to (Thompson, 1975), children of all ages in the participant sample were asked what gender they identified as. Children were only presented with characters matching their identified gender, as previous evidence suggests gender can influence children's attitudes (Charsley et al., 2018), thus reducing a potential confounding impact on the findings. Children in reception to year two worked through the questionnaire individually with a researcher reading each question aloud to them. The older children (year three to five) completed the questionnaire independently and silently, in groups of three to four, with a researcher present to answer any questions. A number of steps were taken in order to reduce harm including (but not limited to) filler questions, no conferring between participants during completion of the questionnaire, and a debrief form given to teachers to hand to parents if they were concerned. No child showed signs of distress related to the study. Individuals completed the questionnaires on an iPad via an online survey platform (Qualtrics®: <https://www.qualtrics.com>) and during usual class time. Questionnaires were completed within approximately 25-30 minutes, with variation according to reading ability and age. All

data were collected between July 2018 and April 2019. The study received full ethical approval by the ethics committee at [university name].

Measures

Public and Participatory Involvement (PPI). In order to assess the suitability and understanding of these measures with this age group, PPI was conducted with four families with a child of primary school age (one family included a child with a visible difference). Feedback resulted in appropriate changes being made such as shortening of the questionnaire and providing definitions for words (e.g., 'attractive' being described as pretty or handsome). The questionnaire was then piloted with a young child (aged 6 years), whereby the first author completed the process of working through the questionnaire with the child. This validated that the process and language were appropriate for utilisation with young children of this age group.

Attitudes toward appearances. Participants were presented each of the five characters in a random order. A series of visual analogue scales (VAS) assessed children's attitudes toward the characters. VAS have been successfully used to measure a wide variety of constructs, including attitudes towards body image (Cattarin, Thompson, Thomas & Williams, 2000; Heinberg & Thompson, 1995). Adjectives measured were adapted from a recent study by Masnari et al. (2013) who devised a three factor, principal component structure: (1) personal attributes, (2) social attributes, and (3) looks/intelligence. For these constructs, two adjective pairs were selected from each component, to total six items; Personal attributes: (a) *nice/mean*, (b) *happy/sad*, social attributes: (c), *unpopular/popular*, (d) *likeable/unlikeable*, looks/intelligence: (e) *good looking/ugly*, and (f) *good/bad at school*. To suit the VAS, adjectives were adapted so that there was only one positive adjective for each adjective pair (e.g., *nice/mean* to only *nice*), and the language amended (e.g., *likable* to *people like him/her*) using the British National Corpus (<https://corpus.byu.edu/bnc/>) to match

the readability of the participant age group. Additionally, the terms '*confident*' and '*lazy*' were added, as literature suggests adjectives such as '*lazy*' and '*sloppy*' are judgements made by children towards those who are of higher weight (Dohnt & Tiggemann, 2008), and much of the research suggests a visible difference can lower one's self confidence e.g., individuals with a cleft (Turner, Thomas, Dowell, Rumsey & Sandy, 1997). Together this resulted in the inclusion of eight items: (a) *nice*, (b) *happy*, (c) *confident*, (d) *lazy*, (e) *people like him/her*, (f) *popular*, (g) *attractive*, and (h) *clever*. For each adjective, the scale ranged from '*not at all*' to '*a lot*.' The 8 adjectives were averaged (reverse scoring '*lazy*') to create a total attitudinal score, with higher scores indicating more favourable attitudes. The reliability of the adjective items for this scale was between the recommended values (DeVellis, 2003; Kline, 2005) $\alpha = .795$ and good $\alpha = .866$ for all characters and both genders.

Friendship behaviours. For each character participants were asked to imagine the character has recently joined their school. Then participants were asked their willingness to interact or befriend the character; responding either *no* (1), *maybe* (2), or *yes* (3) to four statements. The four items included: "*I would feel comfortable being around [character's name]*," "*I would like [character's name] as a friend*," "*I would invite [character's name] to my house*" and "*I would tell [character's name] a secret*". These items were adapted to suit a younger age group based on a measure by Masnari et al. (2013) which evidenced prior internal consistency ($\alpha = .92$) with children aged 8-17 years. In the current study, Cronbach's α for this scale were between $\alpha = .696$ and $\alpha = .849$ for all characters and both genders.

Forced preference. Forced preference was measured by presenting the children with all five characters and asking, '*Out of all the characters, which character would be your best friend?*' Forced choice questions have been used previously in research assessing attitudes towards appearances (Sigelman et al., 1986). Forced choice responses are a useful way to

force respondents to express opinions and illicit attitudes that may be impacted by social desirability (Allen, 2017).

Results

Given the study's design and multiple variables, a power calculation was made to establish the required number of participants. After performing a G*power calculation (Faul, Erdfelder, Lang, & Buchner, 2007), it was concluded that a total sample size of 380 participants would be required to detect a medium to small effect size, with at least 94% power.

All analyses were conducted using the Statistical Package for the Social Sciences (SPSS), version 23. Raw data were cleaned and screened, and examined for outliers, skewness, and kurtosis. In total, surveys were collected from 408 participants. Of these, a small number ($n = 12$) were removed due to either reasons reported by the researcher at the time of data collection such as, lack of understanding and no engagement, or not completing measures for at least two characters in the questionnaire. As the children saw the character which corresponded with their gender (children who identified as male saw the male characters etc.), analyses were separated according to gender.

Attitudes toward appearances

Table 1 displays the means and standard deviations of the children's attitudinal ratings towards the characters.

To evaluate whether children's attitudes towards the characters significantly differed, two one-way repeated measures ANOVA's were conducted, one for boys and one for girls. For the girls, the assumption of sphericity was violated, as assessed by Mauchly's test of sphericity. Therefore, a Greenhouse-Geisser correction was applied ($\epsilon = 0.899$). For the boy's data, the assumption of sphericity was met, $\chi^2(9) = 15.64, p = .075$. The results showed a significant effect of attitudes towards the characters appearances for both boys $F(4, 712) =$

38.48, $p < .001$, partial $\eta^2 = .178$, and girls $F(3.60, 744.51) = 44.94$, $p < .001$, partial $\eta^2 =$

.178. Post hoc analysis with a Bonferroni adjustment calculated for both boys and girls revealed all character differences were the same. Results showed the higher weight character received significantly less positive attitudes compared to all other characters, including the character with a facial burn (boys: $p = .001$, girls: $p = .002$), the character with no stigmatised appearance (boys: $p < .001$, girls: $p < .001$), in a wheelchair (boys: $p < .001$, girls: $p < .001$), and wearing glasses (boys: $p < .001$, girls: $p < .001$). The character with a facial burn received significantly less positive attitudes compared to the characters with no stigmatised appearance (boys: $p < .001$, girls: $p < .001$), in a wheelchair (boys: $p = .001$, girls: $p < .001$), and wearing glasses (boys: $p < .001$, girls: $p < .001$). All other character comparisons did not significantly differ ($p > .05$). The results confirm that both boys and girls aged 4-10 years have significantly less positive attitudes toward the characters with a facial burn and of higher weight, compared to the characters with no stigmatised difference, wearing glasses and in a wheelchair. The higher weight character also had significantly less positive attitudes in comparison to the character with a burn, meaning the higher weight character had the least positive attitudes attributed overall, compared to all other characters.

In order to further evaluate the specific differences regarding the adjectives for the five characters, two one-way repeated measures MANOVA's were conducted (separate for both boys and girls). Results revealed a significant within subjects effect of character and the adjectives for both boys ($F(32, 137) = 5.41$, $p < .001$, partial $\eta^2 = .558$) and girls ($F(32, 166) = 5.97$, $p < .001$, partial $\eta^2 = .535$). A series of multiple pairwise comparisons with a Bonferroni adjustment revealed, compared to the character with no stigmatised difference, the higher weight character was rated significantly less positively by both boys and girls on all adjectives (less nice, less happy, less confident, less likeable, less popular, less attractive, less clever and lazier: *all p's* $< .01$, except less happy = .022 for girls). Further, in comparison

to the character with no stigmatised difference, the character with a facial burn was rated as significantly less positive (*all p's* < .05) on all adjectives except clever and lazy for both boys and girls.

Further analysis by year group can be found in the supplementary material.

Friendship behaviours

Participants responded to four statements regarding various positive friendship behaviours. Table 2 highlights, for boys and girls respectively, the percentage frequencies of responses regarding these statements.

In order to determine if there were significant differences in children's friendship behaviours towards the various stigmatised appearances, a Friedman test was calculated with the characters as the independent variable and a computed total of positive friendship behaviours from the four questions ('comfortable around', 'like as a friend', 'invite to my house', 'tell a secret') as the dependant variable. As previously described, calculations were conducted separately for boys and girls. Results found friendship behaviours significantly differed towards the various stigmatised appearances for both boys, $\chi^2(4) = 113.91, p < .001$, and girls $\chi^2(4) = 129.35, p < .001$. Dunn-Bonferroni post hoc analysis revealed both boys and girls were significantly less likely to engage in positive friendship behaviours with the higher weight character compared to the character with no stigmatised appearance, glasses wearing character and character in a wheelchair (*all p's* < .001). Girls were also significantly less likely to engage in positive friendship behaviours with the higher weight character compared to the character with a burn ($p = .003$), for boys this was approaching significance ($p = .055$). Similar to the higher weight character, both boys and girls were significantly less likely to engage in positive friendship behaviours towards the character with a burn compared to the character with no stigmatised appearance (boys: $p < .001$, girls: $p = .009$), glasses wearing

character (boys: $p = .002$, girls: $p < .001$), and character in a wheelchair (boys: $p = .006$, girls: $p < .001$). This suggests children's friendship behaviours significantly differ according the stigmatised appearance presented, with both boys and girls less likely to engage in positive friendship behaviours with individuals of higher weight and with a facial burn in comparison to people with no stigmatised appearance, who wear glasses and in a wheelchair.

Forced preference

Participants were asked to indicate which one of the characters they would choose to be their best friend. Table 3 reveals frequencies for characters who were chosen as best friends by participants, split according to gender.

The table highlights the higher weight character would be the least likely chosen as the best friend, for both boys and girls. This was followed by the character with a burn, who was ranked fourth in the forced choice task by both genders. The rank order of the other characters varied slightly according to gender of the participants. In order to test for differences between genders on the frequency of character selected as a best friend, a chi-squared test was calculated. Results revealed a significant difference between genders ($\chi^2 (4) = 14.16, p = .007$) with boys choosing the character in a wheelchair significantly less frequently as a best friend (15.6%), compared to the girls (26.6%). There were no other gender differences.

Discussion

In this study of children's attitudes towards various socially stigmatised appearances, children's attitudes did vary according to the type of appearance presented. The characters of higher weight and with a facial burn were evaluated less positively compared to the other characters by both boys and girls. Additionally, both boys and girls were less likely to engage in positive friendship behaviours towards the higher weight character and character with a

facial burn compared to the other characters. In further support, when children were forced to choose which character would be their best friend, the character of higher weight was the least likely to be chosen, with the facial burn character chosen second-to-last. The results indicate children aged 4-10 years have less positive attitudes and friendship behaviours towards the characters representing higher weight and a facial burn. Further analysis within the supplementary material regarding the individual school years found attitudes did significantly differ across school years for both genders, weight stigma develops early (Reception – Year 1; 4-6 years) and continues throughout the school years, stigma towards facial burns develops at around Year 2-3 (age 6-8 years) and maintains throughout the school years. Additionally, less positive attitudes towards physical disabilities, in the form of a wheelchair, develop in boys by Year 4-5 (8-10 years).

The current study's findings support the notion that weight stigma is present in young children. This is consistent with previous research, which suggests weight stigma develops early and has even been evidenced to be present earlier than the current studies sample, at age 3 years (Cramer & Steinwert, 1998; Spiel et al., 2012). This suggests preventative intervention efforts regarding weight stigma might usefully consider targeting children *younger than* 4-10 years, as weight stigma is clearly present by this age. However, this is likely to be practically challenging given early intervention would require targeting children pre-school and assessment in this age group is complex and involves a number of ethical considerations (e.g., informed assent) (Einarsdóttir, 2007). The current findings also align with early attitudinal research suggesting by the ages of 5-7 years both boys and girls make judgements and ascribe unfavourable adjectives to those of higher weight (Staffieri, 1967), supporting the notion children view higher weight children as 'lazy' (Dohnt & Tiggemann, 2008). The current results highlight how negative connotations towards weight are still very present in early childhood today. A number of reasons might explain why weight stigma has

not reduced over the years. For example, the belief that weight related comments will motivate people to lose weight (Pont, Puhl, Cook & Slusser, 2017), as well as the rise of stigmatising obesity health campaigns, which have been evidenced to perpetuate weight stigma (Puhl, Luedicke & Peterson, 2013). These messages, and lack of legal legislation to protect individuals from weight stigma (Walls, Peeters, Proietto & McNeil, 2011), may indeed help to explain why weight stigma has increased significantly from the 60's to the early 2000's (Latner & Stunkard, 2003) and why implicit attitudes towards body weight are unlikely to change in the future (Charlesworth & Banaji, 2019). This is an important consideration for health, as weight stigma has been evidenced to facilitate maladaptive eating behaviours and weight gain in an adult sample (Wellman, Araiza, Newell & McCoy, 2018). Further, a systematic review by Phul and Suh (2015) found people who experience weight related stigma are at increased risk of adverse health consequences such as increased food consumption, avoidance of physical activity, psychological distress and impaired weight loss outcomes. In adolescence, weight stigma and teasing has also been associated with higher depression and lower body image (Eisenberg, Neumark-Sztainer, Haines & Wall, 2006). Other research highlights children subjected to weight stigma in physical activity settings report less liking and lower participation of sports (Faith, Leone, Ayers, Heo & Pietrobelli, 2002), and poorer subsequent health-related quality of life for those of higher weight (Jensen, Cushing & Elledge, 2014). Clearly, given the serious consequences of weight stigma on individuals of all ages, including children, it is critical effective approaches for the reduction of weight stigma are developed and tested.

Additionally, this study found children from age 4-10 years displayed less positive friendship behaviours and were least likely to choose the higher weight character as a best friend. These findings support previous research which found at age 5 children make behavioural judgements based on weight and are less likely to choose a higher weight child

as a playmate compared to a 'normal' weight child (Dohnt & Tiggemann, 2008). In light of findings from the current and previous studies, evidence suggests that in comparison to other socially stigmatised appearances, not only do children hold negative attitudes towards people of higher weight at a young age, they are also less likely to befriend them. These findings add to the literature on child weight stigma (Harrison, et al., 2016; Madowitz, Knatz, Maginot, Crow & Boutelle, 2012; Pont et al., 2017; Puhl & Latner, 2007), but in a comparative manor in relation to a number of other socially stigmatised appearances. Findings further highlight an urgent need to prioritise the reduction of weight stigma in children (Puhl & Latner, 2007).

Contradictory to research by Latner and Stunkard (2003), who found increased levels of acceptance towards facial differences in children from 1961-2001, the current study suggests the character with a facial burn was viewed less positively (via less favourable attitudes and friendship behaviours) than all of other characters besides the higher weight character. Specifically, children viewed the character with a facial burn as less nice, happy, confident, likeable, popular and attractive. The current study's findings are supported by research which has found general attitudes towards facial differences are negative (Rankin & Borah, 2003), and children attribute less favourable personality characteristics towards those with a facial difference compared to those without (Masnari et al., 2013). Notably the type and scale of the facial difference can impact on research findings. Research suggests children with a facial difference which covers more than approximately 25% of the face are arguably at greater risk of stigmatisation (Masnari et al., 2012). As the current study included a burn covering slightly less than half of the face, it is perhaps the degree of severity which resulted in the less positive attitudes towards the character with a facial burn. Additionally, individuals with an acquired facial difference report slightly more stigmatisation from others compared to individuals with congenital facial differences (Strauss et al., 2007). The study by Latner and Stunkard (2003) included a congenital facial difference (cleft lip and/or palette),

which may explain why they found greater acceptance, compared to an acquired facial difference in the present study. Future research should further consider the type of facial difference presented as this could impact the attitudes and evaluations received by others.

The present study found both the character in a wheelchair and wearing glasses were viewed relatively positively by young children. These findings support research evidence suggesting children's attitudes towards a character in a wheelchair fairs relatively equal to the character without a stigmatised appearance (Harrison et al., 2016). However, Latner and Stunkard (2003) found a decrease in children's acceptance towards those in a wheelchair over a 40-year period. Potentially the recent increase in children's acceptance towards those in a wheelchair could be attributed to increased media representation and awareness (e.g., the Paralympic games, Brittain, 2017). This warrants further exploration. Further, when forced to choose a best friend, boys were significantly less likely to choose the character in wheelchair than girls. This replicates previous findings showing that compared to girls, boys are less accepting of functional disabilities (Latner & Stunkard, 2003; Richardson et al., 1961; Sigelman et al., 1986) and show less playmate preferences towards those in a wheelchair (Nabors & Larson, 2002). Theoretical evidence highlights girls' bodies are both portrayed and viewed as objects and are valued for their appearance (Fredrickson & Roberts, 1997), whereas boys' bodies are seen as a process, emphasising functionality and empowering strength (Franzoi, 1995). These attributions might potentially account for the stigma towards functional abilities among boys. It is recommended that future interventions aiming to target young children's attitudes towards socially stigmatised appearances consider the influence of both gender and social norms.

Strengths and Weaknesses

The strengths of this study include its large sample size, the young sample and large age range, and the use of varying methods of attitudinal analysis, considering attitudinal,

behavioural and forced choice questions. Additionally, Masnari et al. (2013) recommended using digitally designed images of the same character but with different conditions to reduce confounding characteristics which may impact on attitudes (e.g., facial expression). The current study implemented this recommendation and therefore reduced the likelihood of these as confounding factors. It is recommended that future studies also follow a similar approach. Additionally, this study included a number of approaches to measure stigma in young children (attitudinal visual analogue scales, behavioural intentions and forced preference). This allows for greater generalisation of trends in the data (Sigelman et al., 1986), as well as understanding both the attitudinal and behavioural elements of children's stigma. This is an important measurement factor to be considered in future research when evaluating stigma in young children. Lastly, the sample is generally representative of the overall ethnicity of ethnic groups within the UK (86% White, 7.5% Asian, 3.3.% Black ethnic groups and 3.2% mixed and other ethnic groups; Office for National Statistics, 2018), and reflects the diversity of the primary schools recruited within a city in the South West of England.

Despite its strengths, the study includes various notable limitations. Firstly, the digitally designed characters only included one type of visible facial difference (burn scars), and one type of physical disability (wheelchair). As discussed, other forms of facial differences have shown to impact attitudes. This limits the generalisability of the findings to other facial differences and disabilities. Secondly, self-developed and adapted measures of attitudes and friendship behaviours were used to assess the children's attributes towards the socially stigmatised appearances. Previous research has primarily focused on the impact of stigma on adult populations (Parcesepe & Cabassa, 2013). Although some research had developed measures regarding perceived stigma towards children (e.g., emotional and behavioural problems, Heflinger, Wallston, Mukolo & Brannan, 2014), there is clearly a need for validated attitudinal measures of stigma towards a variety of appearances, which are

suitable for young children. Future research should develop and validate these measures of children's attitudes. Further, the attitudinal measures were explicit, which does not tap into implicit attitudes and may lead to socially desirable responses from the participant (Gawronski & Hahn, 2019). In the current study, careful consideration was given to the selection of attitudinal measures and given the scope of the study and ease for the participant age group, explicit measures were deemed most appropriate. Nevertheless, future research might usefully combine explicit and implicit measures of attitudes, such as the Implicit Association Test (IAT: Greenwald, McGhee & Schwartz, 1998). Promisingly, in recent years the IAT has been modified for use with children and has been found to demonstrate internal consistency and test-retest reliability of children's race attitudes comparable to that of adults (Williams & Steele, 2016). As well as considering these measurement factors, research should also examine the experimental setting and broader contexts (e.g., country where the research takes place) which may impact children's perceptions of others (Pauker, Williams & Steele, 2016). Furthermore, although exploratory analysis was conducted on whether the participants themselves had a socially stigmatised appearance and the potential impact of this on attitudes towards others, this did not impact the results. Future studies should examine the factors and underlying beliefs which may impact children's attitudes, as well as predictors such as, familiarity with the stigmatised appearance, the media, family, peers.

Implications

The results of this study have important practical implications. The data calls attention to the need for psychosocial education programs for young children, aimed at reducing negative attitudes towards various socially stigmatised appearances. Parents, educators and health professionals (not just those who have specific experience of someone with a socially stigmatised appearance), should be provided with the tools to challenge appearance-related stereotypes and foster acceptance towards diverse appearances in young children. On a

broader level, macro interventions and social campaigns targeting policy and societal conceptualisations of socially stigmatised appearances are required as a 'top-down' approach. For example, the British charity Changing Faces (www.changingfaces.org.uk) launched the 'Face Equality Campaign' in 2008 aiming to raise public awareness and reduce stigma regarding facial differences. More recently in 2018, Face Equality International (<https://faceequalityinternational.org>) was founded with the same aims as Changing Faces, but on a global scale. Usefully, these campaigns have been adopted for several contexts (e.g., schools, television and posters). However, macro interventions, such as these campaigns, warrant evaluation of intervention effectiveness.

Conclusion

Findings from this study reveal children aged 4-10 years have the least positive attitudes and friendship behaviours towards those of higher weight and with a facial burn. Weight stigma seems to develop earlier and then stigma towards a facial burn shortly after. This is important to not only arm individuals who have a stigmatised appearance with supportive strategies, but to provide deeper understanding of possible attitudes towards stigmatised appearances and inform implementation for future interventions to promote acceptance of these groups. It is suggested weight and visible difference stigma is targeted in very young children, with the potential to include variances for emphasis of functional disabilities for boys. Early intervention targeting both boys and girls at an early age may help to reach children before their opinions about their own and other appearances are solidified and thereby help to normalise the acceptance of diversity of all appearances. Further investigation into the risk and protective factors which may influence children's attitudes towards various socially stigmatised appearances will deepen understanding and influence intervention design.

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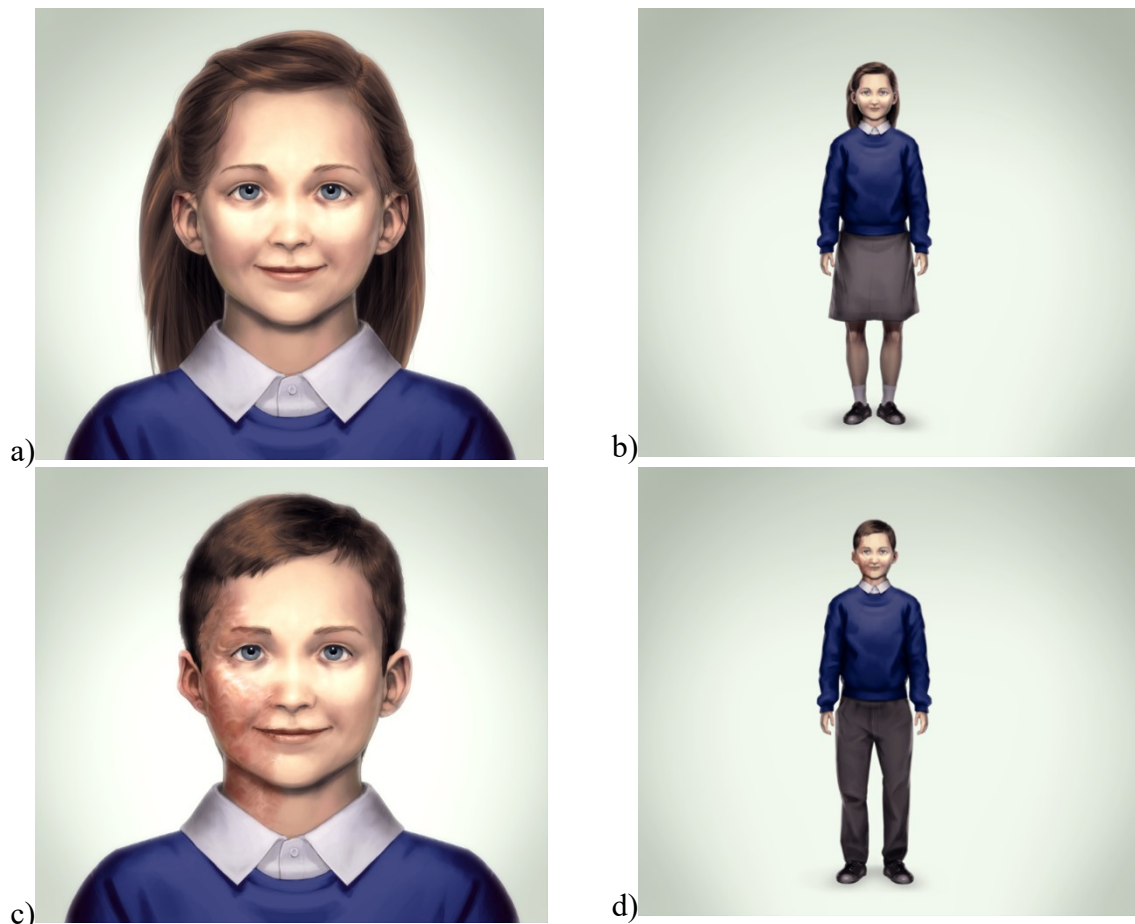


Fig. 1. Stimulus material consisted of five digitally designed characters depicted with a profile and full body image. All characters were produced in both male and female form. The characters included no stigmatised appearances (female example a and b), burn scars (male example c and d), wheelchair using, glasses wearing and of higher weight.

Table 1. Average attitudinal ratings towards the characters, split by gender (M, SD)

	Character									
	No stigma		Burn		Wheelchair		Glasses		Higher weight	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Mean attitude ratings:	(range n = 179-182)	(range n = 208-211)	(range n = 180-183)	(range n = 206-209)	(range n = 181-183)	(range n = 208-211)	(range n = 181-183)	(range n = 205-210)	(range n = 181-182)	(range n = 207-211)
1. Nice	75.09 (29.14)	75.71 (28.51)	66.01 (33.60)	69.41 (30.38)	75.78 (27.47)	80.22 (24.65)	71.10 (31.59)	78.30 (26.49)	62.21 (33.33)	61.97 (31.74)
2. Happy	78.51 (25.94)	74.90 (28.31)	69.81 (30.46)	65.18 (31.86)	72.42 (29.70)	74.04 (30.21)	75.20 (29.00)	78.62 (25.64)	68.39 (32.35)	67.06 (31.79)
3. Confident	70.42 (30.59)	69.64 (31.43)	60.30 (34.35)	59.49 (33.66)	66.10 (31.02)	67.99 (30.24)	72.27 (30.13)	72.10 (28.91)	55.13 (34.77)	56.99 (33.57)
4. People like (him/her)	72.12 (29.31)	75.06 (27.86)	55.23 (35.43)	56.77 (33.00)	65.72 (33.35)	71.54 (29.38)	71.03 (30.54)	74.14 (27.49)	49.05 (34.89)	55.32 (33.19)
5. Popular	66.17 (30.98)	68.13 (32.00)	51.03 (36.11)	53.21 (35.35)	59.15 (34.37)	65.40 (32.47)	63.61 (31.63)	65.72 (33.58)	48.10 (35.58)	48.42 (33.28)
6. Attractive	62.58 (33.23)	70.90 (30.99)	50.54 (36.10)	53.23 (34.64)	58.08 (33.54)	64.80 (33.49)	61.52 (32.92)	67.34 (32.35)	40.30 (35.16)	45.34 (35.37)
7. Clever	71.65 (29.35)	71.69 (28.82)	65.25 (31.79)	68.98 (30.24)	70.93 (29.93)	75.92 (27.19)	79.02 (27.58)	81.47 (24.74)	54.60 (35.20)	60.64 (31.47)
8. Lazy	28.49 (36.13)	29.94 (36.39)	30.72 (36.00)	31.86 (35.49)	30.38 (35.61)	30.16 (35.68)	29.21 (36.61)	23.56 (32.40)	45.56 (40.27)	42.98 (37.90)
Total ^a	71.02 (21.77)	72.00 (21.94)	60.83 (23.89)	61.86 (24.21)	67.22 (21.03)	71.17 (19.66)	70.57 (20.55)	74.24 (19.72)	54.01 (23.93)	56.62 (24.30)

Note: Scale ranges from 1-100, higher scores indicate more positive attitudes.

^aThe negative adjective (lazy) is reversed in total.

Table 2. Frequency of friendship behaviours towards the characters, split by gender (%)

Friendship behaviours:		Character									
		No stigma		Burn		Wheelchair		Glasses		Higher weight	
		Male (n = 182)	Female (n = 210)	Male (n = 182)	Female (n = 210)	Male (n = 183)	Female (n = 210)	Male (n = 182)	Female (n = 210)	Male (n = 182)	Female (n = 211)
1. Comfortable around	Yes	63.2%	61.9%	40.1%	49.5%	54.1%	71.4%	58.8%	71.9%	35.2%	41.2%
	Maybe	23.1%	28.6%	33.5%	35.2%	29.0%	21.4%	25.8%	21.0%	30.2%	37.0%
	No	13.7%	9.5%	26.4%	15.2%	16.9%	7.1%	15.4%	7.1%	34.6%	21.8%
2. Like as a friend	Yes	65.4%	68.6%	48.9%	54.3%	59.0%	72.4%	65.9%	69.5%	34.6%	44.1%
	Maybe	24.2%	23.8%	30.8%	34.3%	29.0%	21.4%	18.7%	23.8%	35.7%	39.3%
	No	10.4%	7.6%	20.3%	11.4%	12.0%	6.2%	15.4%	6.7%	29.7%	16.6%
3. Invite to my house	Yes	50.0%	55.2%	31.9%	38.1%	41.0%	52.4%	40.1%	57.1%	23.6%	28.4%
	Maybe	31.3%	33.8%	38.5%	42.9%	40.4%	38.6%	36.8%	30.5%	37.4%	43.6%
	No	18.7%	11.0%	29.7%	19.0%	18.6%	9.0%	23.1%	12.4%	39.0%	28.0%
4. Tell a secret	Yes	32.0%	37.6%	25.3%	31.4%	35.5%	44.0%	28.6%	39.0%	18.1%	22.4%
	Maybe	33.7%	32.4%	29.7%	36.2%	29.0%	34.4%	28.6%	29.5%	27.5%	34.8%
	No	34.3%	30.0%	45.1%	32.4%	35.5%	21.5%	42.9%	31.4%	54.4%	42.9%
Total	Yes	52.7%	55.8%	36.6%	43.3%	47.4%	60.1%	48.4%	59.4%	27.9%	34.0%
	No	19.3%	14.5%	30.4%	19.5%	20.8%	11.0%	24.2%	14.4%	39.4%	27.3%

Table 3. Percentage of characters chosen as best friends by gender (rank order)

	All ages	
	Male	Female
No appearance stigma	35.8% (1)	25.6% (3)
Burn	15.1% (4)	9.7% (4)
Wheelchair	15.6% (3)	26.6% (2)
Glasses	27.4% (2)	34.8% (1)
Higher weight	6.1% (5)	3.4% (5)