# *Do we cause harm? Understanding the impact of research with young children about their body image*

**Abstract**

Although research into the early development of body image and eating behaviors is essential, concerns have been raised about whether their assessment might precipitate body or eating concerns in children. We aimed to identify how parents perceived their young children (under 9 years) had been impacted from involvement in the longitudinal Children's Body Image Development Study (CBIDS) that assessed body image and eating behaviours. Participants were 218 parents (99% mothers) who completed an online questionnaire assessing whether and why their child discontinued participation in CBIDS, and the perceived impact of participation on children's body image, weight attitudes, language about bodies, internalisation of appearance ideals, peer appearance conversations, dietary restraint, muscle building activities, and physical activity. Impact and reasons for cessation of participation were assessed retrospectively. Almost all parents were positive or neutral about their child's involvement, 0.5% to 3.2% of parents perceived a negative impact in an area, and 0.9% of parents moderately agreed that they regretted participating in CBIDS. Themes for positive and negative aspects of CBIDS involvement were explored using thematic analysis. Although research is essential to guide development of prevention strategies, this study highlights the need to implement safeguards to ensure a positive experience for all children.

Key words: body image, children, parents, impact, risk, weight bias.

Understanding the development of body image and related attitudes (e.g., internalization of appearance ideals, weight bias) and behaviors (e.g., appearance comparison and dietary restraint) has long been of interest to eating disorder prevention and treatment researchers, as evidence in adolescents and adults highlights that body dissatisfaction is an important risk factor for the initiation of unhealthy dieting and muscle building behaviors, disordered eating behaviors, higher weight, clinical eating disorders, and a range of other mental health concerns (e.g., depression) (e.g., Allen, Byrne, & Crosby, 2015; Goldschmidt, Wall, Choo, Becker, & Neumark-Sztainer, 2016;. Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006; Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006). Increasingly, attention is turning to childhood (i.e., preschool and elementary school) to understand the early development of body image as research indicates that this is frequently an important time for the formation of body image attitudes (Paxton & Damiano, 2016). Thus, understanding children's body image attitudes from their perspective is critical (Birbeck & Drummond, 2005).

Although collection of data directly from children is considered crucial to ensure valid and reliable assessment of body image and eating attitudes and behaviours, it is recognised that this type of information is sensitive, and children may be a more vulnerable group than adults to potential harms associated with research. In our research in this field, we recently observed that some parents also have concerns of a similar nature. In response to requests for consent for early primary (elementary) school children to participate in an intervention study, in which children were to be interviewed about their body image and related attitudes and behaviours, a small number of parents of 8-year-old children at one school raised concerns that their child's involvement in the research could encourage body

dissatisfaction and related behaviors. Although we had many safeguards in place (e.g., parent consent following comprehensive information, use of interview questions reviewed for age appropriateness and delivered by trained interviewers, use of distractor questions, allowing no response to questions, and ensuring children remained comfortable during the interview), and stringent ethical approvals, there was little research in children of this age to draw on to provide reassurance for parents about the impact of their child's participation in the research. To fill this gap, for the purposes of the current research, we conducted a survey of parents whose young children had participated in a separate study, the longitudinal Children's Body Image Development Study (CBIDS), about their views regarding the impact of participation on their children.

**Why conduct body image research with young children?**

Increasingly it is becoming clear that many body image attitudes and eating behaviors are established early in life and go on to have long-term consequences. For example, weight bias attitudes are established in children as young as three years old (Harriger, Schaeffer, Thompson, & Cao, 2019; Spiel, Paxton, & Yager, 2012; Spiel et al., 2016). Of 6- to 9-year-old girls, 54% desire a thinner body (Slater & Tiggemann, 2016) and up to 47% of 6- to 11-year-old boys desire to be thinner and up to 44% desire to be larger (Ricciardelli, McCabe, Mussap, & Holt, 2009). In relation to muscularity preferences, research has shown that greater proportions of 6-year-old boys state a preference to have a more muscular (32%) than less muscular (16.8%) body shape (McLean, Wertheim, & Paxton, 2018). An additional study by Damiano and colleagues (2015) found that 34% of 5-year-old girls reported moderate levels of dietary restraint according to criteria established for the Dutch Eating Behavior Questionnaire for Children (van Strien & Oosterveld, 2008). Although

a cross-sectional study, dietary restraint was predicted by media exposure and peer appearance conversations (Damiano et al., 2015). Further, high weight concerns in girls at 5 and 7 years have been shown to predict higher dietary restraint, more maladaptive eating attitudes, and a greater likelihood of dieting at 9 years, independent of body mass index (BMI; Davison, Markey & Birch, 2003). Research is required to understand risk factors for these attitudes and behaviors to inform effective prevention strategies.

It is important that children are asked directly about their body image attitudes and behaviors at this age, as parental reporting of children's attitudes and behaviors may be unreliable. Some research has highlighted discrepant reports between parents and children in relation to the child's psychological state and eating behaviour, such as, parents have reported greater levels of children's emotional and external eating behaviors than their 7- to 15-year-old children reported (Braet et al., 2007) and more severe levels of child behavioural and emotional problems than their adolescent children (Handwerk, Larzelere, Soper, & Friman, 1999), but fewer negative life events than children aged between 7 to 18 years (Johnston, Steele, Herrera, & Phipps, 2003). Parents and 7- to 8-year-old children differ in reports of child self-esteem and perfectionism, such that child-report captures substantial predicted relationships with child body esteem whilst parent-report does not (Nichols, 2017). Similarly, research has found that although early primary (elementary) school teachers have not reported appearance-based teasing as being a frequent occurrence in their 5- to 8-year-old students, child reports have indicated that 56% have reported being teased about their appearance by peers (Damiano, Yager, McLean, & Paxton, 2018). These findings suggest that, assuming it is safe to do so, gathering data directly from children is likely to be more valid and reliable than depending on parent or teacher report.

**Parental concerns about interviewing children about their body image**

Despite the valuable insight children can provide into their attitudes, behaviors, and experiences when they participate in research, it is important to acknowledge the potentially sensitive nature of the questions being asked and that there may be a possibility of causing distress. We were reminded of this in our recent intervention research study in which we sought informed parent consent to engage their 5- to 8-year-old children in play-based interviews that would ask questions related to their child's body image. As part of the informed consent process, parents were able to view the interview questions their children would be asked. A small group of parents of 8-year-old girls raised objections to the interview questions.

The interview questions about which parents had concerns were drawn from measures previously used in research with children including: the Body Esteem Scale revised for Children (BES; Mendelson & White, 1993) to measure children's body image; the adjective scale in which children attributed personal qualities to a thin and overweight body figure (Holub, 2008) and the negative and positive attitudes scales from the Children's Body Size Attitudes Scale (Damiano, Gregg, et al., 2015) to assess children's weight stigma; age-adapted questions derived from the Sociocultural Attitudes Toward Appearance Questionnaire-3 (Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004) to assess children's internalization of appearance ideals; and an adaptation of the Perception of Teasing Scale (Thompson, Cattarin, Fowler, & Fisher, 1995) and the Teasing About My Body subscale from the Child-Adolescent Teasing Scale (Vessey, Horowitz, Carlson, & Duffy, 2008) to assess children's experience of appearance-based teasing from peers. In addition,

children's height and weight were to be measured by a researcher in a private space and children were to be asked to step onto scales backwards to obscure the reading.

The primary concern of parents was that the interview questions were leading and forced children to make judgements about their own body and that of others, and thus would plant a seed of self-doubt and negativity in their young and impressionable children who otherwise currently did not hold these attitudes. For example, it was suggested that asking the question from the BES "Do you like how you look in pictures?", would prompt a child to now question whether they should not like how they look in pictures. Similarly, asking a child a question from the adapted SATAQ questions, such as "Would you like your body to look like the bodies of people on TV?", would prompt a child to now start to compare their body to those of people on TV. Further, concerns were raised that questions assessing children's weight bias (e.g., "Which one of these boys/girls would you invite/not invite to your birthday party?") forced children to judge other children by their appearance in ways that they otherwise would not have thought about or done. Notably, a couple of parents specifically mentioned their daughter already had body image concerns and were concerned that the questions would trigger further concerns and undo the work they have been trying to do in reducing those concerns. An additional parent concern was that the weighing would instil an obsession with weight, promote negative comparisons, and result in teasing among children, that otherwise would not occur. These are all legitimate concerns, however, as no evidence was available to inform a response to these concerns, we sought data to guide our future response.

**Are we doing harm?**

Although we believed we had always taken care to ensure no harm in our procedures, we needed confirmation to address concerns of parents. Alternatively, should evidence suggest that research of this kind does cause harm, future research practices would need to be modified to ensure that procedures that contributed to harm were omitted from research protocols. There does not appear to be any research literature that specifically reflected on this topic in the body image and eating disorder area in young children, and previous research in other mental health areas (e.g., depression and psychosis) have reported a very low prevalence of distress from research participation in children or adolescents (Jorm, Kelly, & Morgan, 2007). Some data are available in the form of repeat assessments that can offer insights into the effects of responding to questions about body image and eating behaviours. For example, previous test-retest data using a 5-figure rating scale to assess 4-year-old children's current and ideal body size showed no change in ratings two weeks apart (Damiano, Gregg et al., 2015). In addition, there are some prevention intervention studies, such as one by Bird, Halliwell, Diedrichs, and Harcourt (2013) that found no change in body satisfaction of 10- to 11-year-old girls and boys in the no-intervention control group. Similarly, in late adolescent samples no increase in body dissatisfaction is observed with repeat assessments in no intervention control conditions (e.g., Becker, Smith & Ciao, 2005; Stice, Trost & Chase, 2003). Furthermore, in a study designed specifically to investigate potential harm from participation in eating disorders research in early adolescent girls (sixth grade), no evidence of harm was observed (Celio, Bryson, Killen, & Taylor, 2003). Such findings may suggest that participation in body image research is not detrimental to children's body image. Importantly, no research has explicitly explored the impact of assessment in body image research on children.

In our own work, in which we have conducted over 2000 interviews with children aged 3 to 8 years, we had not received any complaints about our research from parents or had parents contact relevant ethics committees to express concern that participation had caused harm. However, it is unknown whether this may have been due to a reluctance to contact the researchers or the absence of harmful effects. To gain further information about parents' views of the consequences of their children completing these questionnaires, we endeavoured to contact the primary caregiver of all children who had participated in the longitudinal Children's Body Image Development Study (CBIDS) at some point and asked them about their child's participation. Thus, the aim of this study was to explore parent perceptions of the impact of their child's participation in CBIDS. No hypotheses were posed as this is an unexplored area of research. Rather we sought to answer the questions: (1) how did parents perceive their child to be impacted (i.e., negative, positive, or no impact) following their child's participation in annual interviews on children's body image and related attitudes?; and (2) what were parents' reasons for ceasing participation in CBIDS (to identify if the reasons for cessation were related to perceived impact of participation on their child)?

## Method

### Children's Body Image and Development Study

Children were recruited into CBIDS in two phases; initially, through advertisement in childcare centres and playgroups, when children were 3 years old (*n* = 285), and second, through advertisements in primary schools, when children were 5 or 6 years old (*n* = 142). Where possible, children were followed-up until 8 years old. Each year families were invited to participate, and unless parents advised they no longer wanted to be involved, families

were invited to participate the following year. The aim for the study was for children and their families to be involved in each year of the study. Parents provided written consent for their child to participate prior to the play-based interview and children's verbal assent was obtained. Interviews were conducted by a trained interviewer in the children's home with a parent nearby when children were young. When children were in primary school some interviews were conducted in a quiet room at their school.

The body image and weight bias interview measures used are outlined above in the Introduction, and described in further detail elsewhere (Damiano, Paxton, Wertheim, McLean, & Gregg, 2015; McLean et al., 2018; Nichols, Damiano, Gregg, Wertheim, & Paxton, 2018; Rodgers, Wertheim, Damiano, & Paxton, 2019; Spiel, et al., 2016; Rodgers, Wertheim, Damiano, Gregg, & Paxton, 2015). Measures assessing more advanced ideas, such as dietary restraint, were included in the later years of the study but not when children were 3 and 4 years old. In the play-based interview, in addition to the body image related items, children were engaged in conversation around topics such as their favourite toy and colour. Children were thanked for their participation, not the quality of responses, and received stickers at the end of each interview and families received a small shopping voucher and entry into lottery draws each year.

**Present Participants and Procedure**

Participants in the current study were the primary caregivers of children who participated in at least one child interview in CBIDS between 2010 and 2016. The CBIDS participant database indicated that 427 children participated in at least one interview during that period. There were 35 families in which two children participated, and in this situation, the researchers identified which sibling participated the longest and asked the parent to

respond to the survey with only that child in mind to minimise participant burden. Consequently, 392 parents (99% mothers) were invited to participate via email invitation, of which eight (2%) no longer had a valid email address or had a full inbox and one asked to be removed from the database. All parents from participating families were asked to participate regardless of whether they had remained involved in the study or discontinued participation. Consent to participate was received by 222 parents (57%) although four did not complete the survey. One parent responded 'no' to the request for consent to participate, and the remainder did not respond to the consent request. The final sample includes 218 parents who responded to questions in relation to the impact of participating in the CBIDS on them and their child (44% parents of girls).

Parents were invited to provide their informed consent for this survey study and complete a brief questionnaire online using Qualtrics software. Four email reminders were sent over 2.5 months as encouragement to participate. As a token of gratitude for their continued support of the CBIDS, participants who completed the questionnaire were entered into a lottery draw to win shopping vouchers. Ethics approval for this study was received from the [redacted] University Human Ethics Committee.

**Measures**

Participants responded to a series of open-ended and closed questions designed for this study to gain a better understanding of the impact of participation in CBIDS on the child.

**Reasons for withdrawing from study.**

Participants were first asked the number of years families had participated in the study. Parents who decided to stop participating before the end of the study were asked to identify reasons for cessation of participation. Parents were provided with seven response

options (see Table 1) and asked to select all options that applied. Those who selected the 'other' option were asked to specify the reason in a textbox.

**Perceived impact of participation.**

Parents were then asked to respond to 11 items to indicate the perceived impact of participation in interviews on a range of their child's body attitudes and behaviours. The areas selected for assessment were based on themes addressed in the interviews in which their children had participated in for in the CBIDS, including their child's body image, weight and appearance attitudes, language about bodies, internalisation of appearance ideals, appearance conversations with peers, dietary restraint, muscle building activities, and physical activity. Parents responded to each item on a 5-point scale (1 = very negative impact to 5 = very positive impact) with a neutral midpoint (3 = no impact). In addition, participants were asked to respond to the statement "I regret participating in the study" on a five-point scale from strongly disagree (1) to strongly agree (5).

Parents were also asked two open ended questions: "For your child, what was the most positive/negative aspect of your child being interviewed as part of the Children's Body Image Development Study?" and parents were encouraged to ask their child directly where possible and report on their child's responses.

**Data analysis**

The frequencies and proportions of different reasons for discontinuing participation were identified. The proportions of participants who rated the impact on their child on different dimensions as very negative, negative, no impact, positive and very positive impact were also calculated.

An inductive approach to thematic analysis was used to identify the main themes and sub-categories of responses to the questions about the most positive and negative aspect of their child being interviewed. This approach to theme identification is a data driven approach (Braun & Clarke, 2006). All responses were entered into a blinded spreadsheet from which the themes (e.g., child feeling important) and sub-categories (e.g., having opinion heard/having something valuable to say) were identified by two coders (authors 1 and 3), who are researchers specialising in body image and disordered eating. The two coders discussed and agreed on the themes then independently rated each response to determine the frequency of responses in each thematic category. Responses could be coded as belonging to more than one theme. A third rater (author 2) reviewed discrepancies in coding and made a final decision. Inter-rater reliability was high with rates of 80.3% for the positive impact question and 87.6% for the negative impact question.

## Results

### Reasons for discontinuing participation in study.

Children in the CBIDS participated in interviews for 1 to 6 years (*M* = 4.63; *SD* = 1.47), with some choosing to discontinue from the study before completion of all waves of the study. Forty-five percent of parents reported their child being interviewed for the full 6 years. In relation to reasons for discontinuing participation, 60 parents provided responses. Table 1 provides the frequency of each response and highlights that the most reported reason for discontinuing their participation in the CBIDS was due to being too busy. A small proportion of parents (10.0%) stated they were not comfortable with the questions being asked in the interview. For those who provided an 'other' response, two voiced concern that the interview questions could plant negative ideas about the body in their child (one of

whom indicated she was reassured after speaking with research staff) and one stated their child was embarrassed about being weighed at school and did not want to continue. An additional three indicated miscellaneous responses, such as renovating or missing the email invitation.

**Impact of participation.**

Nearly all parents provided a response to the questions on impact of participation (98.6%). As shown in Table 2, the majority of parents reported that there was perceived to be no impact on their child's body image attitudes or behaviors resulting from participating in the child interviews. Depending on the area specified, proportions ranged from 62.8% to 86.0% of parents reporting no impact on their child. The area that was least impacted was internalization of appearance ideals. A very small proportion of parents (0.5% to 3.2%) reported a negative impact on their child in a particular area, whilst the areas in which parents reported the most positive impact related to child's body image, weight attitudes, and language about the body (32.0% to 35.3%). For each area queried, the proportion of moderately positive or very positive responses was greater than the proportion of moderately negative or very negative responses. Spearman Rank correlation analyses were conducted to determine whether there was a relationship between the number of years of participation in CBIDS and more positive/negative perceived impact; none of the analyses were significant. In response to the statement "I regret participating in the study", 92.2% responded strongly disagree, 3.7% moderately disagree, 3.2% neutral and 0.9% moderately agree. None of the participants responded strongly agree.

Responses to the question about the most positive aspects of their child being interviewed were provided by 195 (89.4%) parents. Thematic coding resulted in

identification of seven themes, with 272 responses being allocated to a thematic code. Table 3 shows the theme, an example quote, and frequency of each theme. The most frequently occurring theme was “involvement in the research/interview” (37.5%) and the second most frequently occurring was “child feeling important/valued” (23.9%).

Responses to the question about the most negative aspects of their child being interviewed were provided by 191 (87.6%) parents. Thematic coding of responses resulted in identification of nine themes, with 207 responses being allocated to a thematic code. Table 4 shows the themes, an example quote, and frequency of each theme. The most frequently occurring theme was “Nothing to report/does not recall/unsure” (67.6%) with the second most frequently occurring theme being “Interviews were time consuming/boring”. Importantly, for the focus of this research, 3.8% of responses indicated that participation in the interview prompted negative self-evaluation or negative evaluation of bodies more generally, and 1.0% of responses indicated being weighed as a negative aspect of the research participation.

## Discussion

Although understanding body image attitudes in young children is crucial to guide prevention and early intervention (Damiano et al., 2018; Hill, Hart, & Paxton, under review), it has been suggested that asking children about these attitudes may prompt children to be critical of their body or develop negative appearance stereotypes when previously they had not had these concerns or thoughts. In our unique study, the aim was to draw on an existing database of primary caregivers of children who had previously been involved in a longitudinal study of body image development (i.e., CBIDS) to identify whether they perceived their child’s participation in the research had had a negative impact, no impact or

positive impact on body image and related areas. Respondents were overwhelmingly positive about their child's involvement or reported there had been no impact on their child's body image and related areas. However, one parent (0.5%) reported participation had had a very negative impact and three to five parents reported it had had a moderately negative impact on their child's body image or related attitudes. Two (0.9%) moderately agreed with the statement "I regret participating in the study". We also endeavoured to determine the reasons for cessation of participation, which was largely due to being busy and was much less frequently about parental concerns with interview questions.

In relation to research with children, it is very valuable to know that being involved in CBIDS was perceived by a large majority of parents to have had either no impact or positive impact on the body image attitudes of their children. In addition to feeling valued and special for being part of the research, involvement was reported to have promoted more positive feelings about the self and acceptance of diversity in some children, as well as having promoted positive appearance-related conversations at home for a small proportion. From a research perspective, this is valuable to know as children are likely to be more reliable than parent reporters, or at minimum likely to provide a valuable adjunct to parent report, in psychological research (e.g., Braet et al., 2007; Nichols, 2017).

It is concerning, however, that parents of a very small number of children reported a negative impact of being involved in the research. It is important to consider how this could be avoided so as not to lose the benefits to other child participants as well as research and practice. We therefore make several recommendations below and present these in a table (see Supplementary materials) to ensure the conduct of safe body image research with children. (1) The design of research needs to be thoroughly considered to ensure that if

questions about body image or psychological wellbeing are to be addressed, this focus is obscured as much as possible. This may include the inclusion of distractor questions or tasks and aiming to present questions in a positively worded manner. (2) Given that a large number of children were perceived to have felt valued and important for being involved in the research, it may be beneficial for researchers to emphasise to each child how important their views are and how valuable their responses are to help the researchers understand what children their age think about things. (3) It is possible some children may become uncomfortable about participation as the interview progresses, so it may be valuable for researchers to include in their interview training skills in identifying discomfort in children and ensuring children are given an 'out' (e.g., explicitly asking a child if they do not want to answer a specific question). (4) If children are to be weighed, the weight display should be obscured by having them face away from the display, placing an obstruction over the display, or using scales with a remote reader. (5) It is also important that parents confirm that they have read the interview or survey questions prior to consenting to ensure that they can consider in advance whether they are comfortable with their child, who may have some pre-existing body image concerns or low self-esteem, to be asked about these concerns in a research context while fully informed that our research findings suggest that being asked about body image and related attitudes and behaviors has not been found to exacerbate concerns. If parents have any concerns at all, they should not give consent to participation and be referred for assistance if required. (6) Following each assessment, parents could be contacted and if they report any negative impact of participation, a referral should immediately be made to ensure no problem escalates. Our results suggest that following completion of research with child participants, parents should be contacted routinely to assess their views. (7) Given that some parents reported that participation

prompted positive conversations about the body at home, it would be wise for research teams to prepare a fact sheet to support parents in talking about body image and related attitudes and behaviours at home. Understandably this may need to occur at the end of a research study in the case of intervention research. This would have the added benefit of assisting parents to provide a positive body image environment for their children. (8) To contribute to the growing body of evidence in this area we would invite researchers conducting body image research with children to publish data regarding the potential positive and negative outcomes of research participation.

Although Thomas Inman's dictum "first, do no harm" is often cited as a guiding principle for health interventions and research, medical ethicists have pointed out that following this aphorism to its logical conclusion would typically result in no action at all (Evans, 2016; Sokol, 2013). In relation to clinical interventions, Sokol (2013) notes that most attempts to benefit a patient requires the infliction of harm or at least the risk of harm and suggests that the clinician's hope is that benefits will outweigh the harms. Sokol (2013) suggests "A more accurate formulation is 'first do no net harm'" (2013, p.1). However, assessing this balance between risks and benefits is not necessarily straightforward and involves value judgements. This is particularly true in research when the benefits are not necessarily immediately apparent, and when the research is with children who are not able to make their own assessment of risks and benefits. However, data presented in this study are essential to inform the risk/benefit analysis involved in future research with children in this field and help in the development of mitigation strategies. Ongoing research to establish the potential impact of involving children in body image research is important. In particular, further investigation could be conducted to determine whether children of

differing ages are impacted differently by participating in body image research, as well as to ascertain whether there is a difference in asking children questions about their own body image, compared with asking children to assign characteristics to varying sized figures to assess their degree of weight bias.

It is important to consider that, just as parents do not appear to be very accurate reporters about their child's attitudes and psychological state, they may also not be entirely accurate about the impact on children of their involvement in research of this kind, either positive or negative, although we are unaware of previous research which reflects on this possibility. In the present study, the views of parents were sought at least one year following any assessment. It is difficult to say exactly what else was happening in the lives of children at the time of assessment. In particular, in the cases of children who were reported to have been negatively affected, they may have been experiencing playground teasing or exclusion at the same time. Similarly, perceptions of positive impact may have been influenced by factors separate from the interview. In addition, a parent's perception of their own body may color their perception of their child's response to participation. Despite these factors being possibilities, in the absence of contrary information, we assume the parent reports were accurate.

This study has several limitations. It was a minimum of one year and usually longer since the child had participated in a research interview, so recall of effects at the time may have been difficult for parents to report. In addition, parents' perceptions of study impact were sought, and it is unclear how reliable they were at judging impact or how they were defining a positive or negative impact. For the questions about the most positive and negative aspects of participation, parents were encouraged to ask their child where

possible; however, data on how many parents sought a response directly from their child were not collected. In addition, child reports were not included in case negative impact was detected. Further, six parents reported in the present study that they had ceased participation in CBIDS as they were not comfortable with the questions being asked and it is unclear whether these children would have been negatively impacted by participation or not.

Body image and weight bias research in young children has helped us gain a better understanding of the early development of these attitudes (Paxton & Damiano, 2016) and has led to the development of prevention programs that we have been able to show are effective through implementation of careful assessment (Hill et al., under review; Damiano et al., 2018). At an individual level, the great majority of parents reported that their involvement in this research had no or a positive impact on their child and had no regrets about involvement. However, this research alerts us to the fact that this is not always the case and researchers need to put in place strategies to ensure all children have a positive experience.

In summary, the present findings highlight that participation in interviews about body image generally has no impact or a positive impact on the majority of children who participated in the CBIDS, with few parents perceiving a negative impact. Given the growing literature that highlights the development of modifiable risk factors for body dissatisfaction and disordered eating at an early age, it is important for research to continue with young children. However, it is equally as important for future research to ensure there are adequate protocols for follow up, referral, and advice for children and families to ensure that any potential negative effect is appropriately addressed (see Supplementary Materials).

In addition, the findings of this study may be used by other body image researchers, who are working with children, and encounter similar concerns from parents or ethics committees. These findings may reassure parents that their concerns have been given serious consideration and that there is a low likelihood of negative impact on body image as a result of participation in research of this kind. We would also encourage more researchers conducting research with children on body image and related constructs to report on any incidents that may arise or tricky conversations they have with parents of child participants, despite that not being the focus of their research, so that we can be better aware of potential concerns and the potential negative impact on children who participate in our research.

**References**

Allen, K. L., Byrne, S. M., & Crosby, R. D. (2015). Distinguishing between risk factors for Bulimia Nervosa, Binge Eating Disorder, and Purging Disorder. *Journal of Youth and Adolescence*, *44*, 1580-91. http://doi.org/10.1007/s10964-014-0186-8

Becker, C., Smith, & Ciao, (2005). Reducing eating disorder risk factors in sorority members: A randomized trial. *Behavior Therapy, 36*, 245–253. https://doi.org/10.1016/S0005-7894(05)80073-5

Birbeck, D. & Drummond, M. (2005). Interviewing, and listening to the voices of very young children on body image and perceptions of self. *Early Child Development and Care*, *176*, 579-596. doi: 10.1080/03004430500131379

Bird, E. L., Halliwell, E., Diedrichs, P. C., & Harcourt, D. (2013). Happy Being Me in the UK: A controlled evaluation of a school-based body image intervention with pre-adolescent children. *Body Image, 10,* 326-334. doi: 10.1016/j.bodyim.2013.02.008

Braet, C., Soetens, B., Moens, E., Mels, S., Goossens, L., & Van Vlierberghe, L. (2007). Are two informants better than one? Parent–child agreement on the eating styles of children who are overweight. *European Eating Disorders Review, 15,* 410–417. doi: 10.1002/erv.798

Braun, V. & Clark, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101. http://dx.doi.org/10.1191/1478088706qp063oa

Celio, A. A., Bryson, S., Killen, J. D., & Taylor, C. B. (2003). Are adolescents harmed when asked risky weight control behavior and attitude questions? Implications for consent

procedures. *International Journal of Eating Disorders, 34*, 251-254. doi:10.1002/eat.10188

Damiano, S. R., Gregg, K. J., Spiel, E. C., McLean, S. A., Wertheim, E. H., & Paxton, S. J. (2015). Relationships between body size attitudes and body image of four-year-old boys and girls, and attitudes of their fathers and mothers. *Journal of Eating Disorders*, *3*, 16. doi: 10.1186/s40337-015-0048-0

Damiano, S. R., Paxton, S. J., Wertheim, E. H., McLean, S. A., & Gregg, K. J. (2015). Dietary restraint of 5-year old girls: Associations with internalization of the thin ideal, maternal, media and peer influences. *International Journal of Eating Disorders*, *8*, 1166–1169.

Damiano, S. R., Yager, Z., McLean, S. A., & Paxton, S. J. (2018). Achieving Body Confidence for Young Children: Development and pilot study of a universal teacher-led body image and weight stigma program for early primary school children. *Eating Disorders: The Journal of Treatment & Prevention*, *26*, 487-504, https://doi.org/10.1080/10640266.2018.1453630

Davison, K. K., Markey, C. N., & Birch, L. L. (2003). A longitudinal examination of patterns in girls' weight concerns and body dissatisfaction from 5 to 9 years. *International Journal of Eating Disorders*, *33*, 320-332.

Evans, J. M. (2016). Do no harm … whatever that means. *Caring for the Ages*, *17*, 10-11.

Goldschmidt, A. B., Wall, M., Choo, T.-H. J., Becker, C., & Neumark-Sztainer, D. (2016). Shared risk factors for mood-, eating-, and weight-related health outcomes. *Health Psychology*, *35*, 245–252. http://dx.doi.org/10.1037/hea0000283.

Handwerk, M. L., Larzelere, R. E., Soper, S. H., & Friman, P. C. (1999). Parent and child discrepancies in reporting severity of problem behaviors in three out-of-home settings. *Psychological Assessment*, *11*, 14-23. doi.org/10.1037/1040-3590.11.1.14

Harriger, J.A., Schaefer, L.M., Thompson, J.K., & Cao, L. (2019). You can buy a child a curvy Barbie doll, but you can't make her like it: Young girls' beliefs about Barbie dolls with diverse shapes and sizes. *Body Image*, *30*, 107–113.

Hill, K. E., Hart, L. M., & Paxton, S. J. (under review*).* Confident Body, Confident Child: outcomes for children of parents receiving a universal parenting program to promote healthful eating patterns and positive body image in their pre-schoolers – an exploratory RCT extension.

Holub, S. C. (2008). Individual differences in the anti-fat attitudes of preschool-children: The importance of perceived body size. *Body Image, 5*, 317-321. doi: 10.1016/j.bodyim.2008.03.003

Johnston, C. A., Steele, R. G., Herrera, E. A., & Phipps, S. (2003). Parent and child reporting of negative life events: Discrepancy and agreement across pediatric samples. *Journal of Pediatric Psychology*, *28*, 579–588. doi.org/10.1093/jpepsy/jsg048

Jorm, A. F., Kelly, C. M., & Morgan, A. J. (2007). Participant distress in psychiatric research: A systematic review. *Psychological Medicine, 37*, 917-926. doi: 10.1017/s0033291706009779

McLean, S.A., Wertheim, E.H., & Paxton, S.J. (2018). Preferences for being muscular and thin in 6-year-old boys. *Body Image*, 26, 98–102. doi: 10.1016/j.bodyim.2018.07.003

Mendelson, B. K., & White, D. R. (1993). *Manual for the body-esteem scale for children*. Montreal, Quebec: Concordia University.

Neumark-Sztainer, D., Paxton, S. J., Hannan, P. J., Haines, J., & Story, M. (2006). Does body satisfaction matter? Five-year longitudinal associations between body satisfaction and health behaviors in adolescent females and males. *Journal of Adolescent Health*, *39*, 244-251.

Nichols, T. E. (2017). *Psychological predictors of body image attitudes and concerns in early school-aged children* (unpublished doctoral dissertation). La Trobe University, Melbourne, Australia.

Nichols, T. E., Damiano, S. R., Gregg, K., Wertheim, E. H., & Paxton, S. J. (2018). Psychological predictors of body image attitudes and concerns in young children. *Body Image*, *27*, 10-20. doi: 10.1016/j.bodyim.2018.08.005

Paxton, S. J. & Damiano, S. R. (2016). The development of body image and weight bias in childhood. In J.B. Benson (Ed.), *Advances in Child Development and Behavior,* ACDB, UK: Academic Press, 52, Ch 8 pp. 269-298 http://dx.doi.org/10.1016/bs.acdb.2016.10.006

Paxton, S. J., Neumark-Sztainer, D., Hannan, P. J., & Eisenberg, M. (2006). Body dissatisfaction prospectively predicts depressive mood and low self-esteem in adolescent girls and boys. *Journal of Clinical Child and Adolescent Psychology*, *35*, 539-549.

Ricciardelli, L. A., McCabe, M. P., Mussap, A. J., & Holt, K. (2009). Body image in preadolescent boys. In L. Smolak& J. K. Thompson (Eds.*) Body image, eating*

*disorders and obesity in youth* (2nd edition). Washington, DC: American Psychological Association. Ch. 4, pp. 77-95.

Rodgers, R. F., Wertheim, E. H., Damiano, S. R., & Paxton, S. J. (2019). Maternal influences on body image and eating concerns among 7 and 8-year-old boys and girls: Cross-sectional and prospective relations. *International Journal of Eating Disorders*, https://doi.org/10.1002/eat.23166

Rodgers, R.F., Wertheim, E.H., Damiano, S.D., Gregg, K.J., & Paxton, S.J. (2015). "Stop eating lollies and do lots of sports": A prospective qualitative study of the development of children's awareness of dietary restraint and exercise to lose weight. *International Journal of Behavioral Nutrition and Physical Activity*, 12:155. http://dx.doi.org/10.1186/s12966-015-0318-x

Slater, A., & Tiggemann, M. (2016). Little girls in a grown up world: Exposure to sexualized media, internalization of sexualization messages, and body image in 6–9 year old girls. *Body Image*, 18, 19-22. doi: 10.1016/j.bodyim.2016.04.004

Sokol, D. K. (2013). "First do no harm" revisited. *British Medical Journal*, *347*, f6426. doi: 10.1136/bmj.f6426

Spiel, E. C., Paxton, S. J., & Yager, Z. (2012). Weight attitudes in 3- to 5-year-old children: Age differences and cross-sectional predictors. *Body Image*, *9,* 524-527.

Spiel, E., Rodgers, R. F., Paxton, S. J., Wertheim, E. H., Damiano, S. R., Gregg, K. J., & McLean, S. A. (2016). "He's got his father's bias": Parental influence on weight bias in young children. *British Journal of Developmental Psychology*, *34*, 198–211. http://dx.doi.org/10.1111/bjdp.12123

Stice, E., Trost, A., & Chase, A. (2003). Healthy weight control and dissonance-based eating disorder prevention programs: Results from a controlled trial. *International Journal of Eating Disorders, 33,* 10-21. https://doi.org/10.1002/eat.10109

Thompson, J. K., Cattarin, J., Fowler, B., & Fisher, E. (1995). The Perception of Teasing Scale (POTS): a revision and extension of the Physical Appearance Related Teasing Scale (PARTS). *Journal of Personality Assessment, 65*, 146-157. doi: 10.1207/s15327752jpa6501_11

Thompson, J. K., van den Berg, p., Roehrig, M., Guarda, A. S., & Heinberg, L. (2004). The Sociocultural Attitudes Toward Appearance Scale-3 (SATAQ-3): Development and validation. *International Journal of Eating Disorders*, *35*, 293-304. doi: 10.1002/eat.10257.

van Strien, T., & Oosterveld, P. (2008). The children's DEBQ for assessment of restrained, emotional, and external eating in 7- to 12-year-old children. *International Journal of Eating Disorders, 41,* 72–81.

Vessey, J. A., Horowitz, J. A., Carlson, K.L. & Duffy, M. (2008). Psychometric evaluation of the child-adolescent teasing scale. *Journal of School Health*, *78*, 344-50. doi: 10.1111/j.1746-1561.2008.00312.x.

Table 1.

*Frequencies of Reasons for Discontinuing Participation in the CBIDS (n = 60)*

| Reason | Proportion selected reason *n* (%) |
|---|---|
| Too busy to continue participating | 23 (38.4%) |
| My child no longer wanted to be involved | 9 (15.0%) |
| We moved interstate/overseas | 9 (15.0%) |
| Other (please specify) | 8 (13.3%) |
| Not comfortable with the questions being asked of my child during the interview | 6 (10.0%) |
| Lost interest in the study | 3 (5.0%) |
| Did not see the benefit of continued participation | 2 (3.3%) |

Table 2. *Proportion of Parents Indicating Impact on Children's Body Attitudes and Behaviors Following Participation in the CBIDS*

| Area of Impact | Very negative | Moderately negative | No Impact | Moderately positive | Very Positive |
|---|---|---|---|---|---|
| Body image | 0.5% | 1.4% | 64.8% | 27.3% | 6.0% |
| Thoughts about body size of others (weight bias) | 0.5% | 1.9% | 65.6% | 27.4% | 4.6% |
| Thoughts about general appearance of others (weight bias) | 0.5% | 0.9% | 63.3% | 31.6% | 3.7% |
| Language about his/her body | 0.9% | 2.3% | 62.8% | 27.9% | 6.1% |
| Language about body of others | 0.5% | 0.9% | 65.6% | 27.4% | 5.6% |
| Desire to look like people in the media (internalisation of appearance ideals) | 0% | 1.9% | 86.0% | 11.6% | 0.5% |
| Conversations with peers | 0.5% | 2.3% | 71.5% | 22.9% | 2.8% |
| Interest in dieting behaviors | 0.5% | 1.4% | 82.8% | 14.4% | 0.9% |
| Interest in muscle building activities | 0% | 0.9% | 77.2% | 19.6% | 2.3% |
| Level of physical activity | 0% | 0.5% | 69.7% | 21.4% | 8.4% |
| Amount of food child eats | 0.5% | 0.5% | 82.3% | 13.5% | 3.2% |

Note: The interpretation of positive impacts is taken to mean that parents thought children had more positive thoughts about their own and other's bodies, were less interested in dieting and muscle building activities and had less desire/interest to look like people in media.

Table 3.

*Themes for positive aspects of child being interviewed and frequency of reporting (n = 272 codes)*

| Theme | Example Quote | Frequency *n* (%) |
|---|---|---|
| Involvement in the research/interview | e.g., “being part of the study”; “appreciating the value of research”; “all the fun activities” | 102 (37.5%) |
| Child feeling important/valued | e.g., “happy to have been given the opportunity to give her opinion”; “feeling important”; “extra attention and interest in their thoughts” | 65 (23.9%) |
| Nothing to report/does not recall/unsure | e.g., “none”; “nothing”; “unsure”; “doesn’t remember” | 37 (13.6%) |
| Positive impact on learning, body awareness and attitudes | e.g., “more aware of his feelings towards his body”; “making him realise that we all come in different shapes and sizes”; “feeling positive about herself” | 33 (12.1%) |
| Prizes | e.g., “the vouchers”; “the stickers” | 13 (4.8%) |
| Prompted positive conversations at home | e.g., ‘‘prompted healthy discussion on important topics”; “provided a platform for me to talk to my child about education, research and body image” | 12 (4.4%) |
| Being taken from class | e.g., “having spent time outside of the classroom”; “getting out of class!” | 10 (3.7%) |

Table 4. *Themes for negative aspects of child being interviewed and frequency of reporting (n = 207 codes)*

| Theme | Example Quote | Frequency *n* (%) |
|---|---|---|
| Nothing to report/does not recall/unsure | e.g., “nothing”; “none”; “no negatives”; “he can’t remember” | 140 (67.6%) |
| Interviews were time-consuming/boring | e.g., “setting aside time”; “found the questions very repetitive” | 14 (6.8%) |
| Not wanting to participate or shy to engage in interviews | e.g., “sometimes didn't want to do it”; “having to talk to someone she didn't know”; “sometimes felt shy” | 13 (6.3%) |
| Leaving class/taken away from other activities | e.g., “time away from playing”; “missing out on fun activity in class”; “being questioned by friends about leaving class” | 12 (5.8%) |
| Prompted negative self-evaluation/evaluation of bodies | e.g., “suggesting body shape was an issue”; “worrying about her appearance”; “thinking about comparing size” | 8 (3.8%) |
| Prompted general self-evaluation | e.g., “spoke about body shape more and noticed it more”; “may start to consider body image as a result of being questioned” | 7 (3.4%) |
| General reference to interview questions/processes | e.g., “A few questions were a little bit complicated”; “having to sit still” | 7 (3.4%) |
| Disappointment when study ended | e.g., “missed some of the games that changed overtime”; “disapointed that the study had ended and that she would not be involved any longer” | 4 (1.9%) |
| Being weighed | e.g., “being weighed”; “being measured for height and weight” | 2 (1.0%) |