

Social comparison and body image in adolescence: a grounded theory approach

A. Kraye^{1*}, D. K. Ingledew² and R. Iphofen¹

Abstract

This study explored the use of social comparison appraisals in adolescents' lives with particular reference to enhancement appraisals which can be used to counter threats to the self. Social comparison theory has been increasingly used in quantitative research to understand the processes through which societal messages about appearance influence adolescents' body image. Little is known about the comparison processes used in their daily lives—to whom individuals compare (the target), on what individuals compare (the attribute) and how they compare (comparison appraisal). Based on the analysis of 20 in-depth grounded theory interviews with 12- to 14-year old boys and girls, we suggest that comparison processes are used for the purpose of identity development (core category). Given the opportunity, adolescents spontaneously describe a variety of targets, comparison attributes and comparison appraisals. Peers play an important part in making sense of media images and messages and provide comparison targets themselves. Adolescents are aware of societal standards and pressures and use a range of enhancement appraisals. The positive impact of these might depend on individual characteristics. Findings

suggest that enhancement appraisals might have a protective function and should be considered in designing health promotion and prevention programmes.

Introduction

Could social comparison theory better inform health promotion and prevention efforts in the area of adolescents' body image perceptions? In recent years social comparison theory has been increasingly used as a framework to elucidate how media and peer messages might influence individuals' perceptions of their bodies [1–5] and elements have been incorporated into pilot prevention programmes [6–8]. Festinger [9] introduced social comparison theory and suggested that individuals process social information by comparing themselves to establish similarities and differences. This information might be sought for a purpose or one might be confronted with it [10]. Depending on the context of the comparison, different comparison appraisals might be employed to deflect threats, learn from others or evaluate one's standing. A better understanding of the use of comparisons to counter threats might be particularly relevant for prevention of threats to well-being and for health promotion programmes. Asking adolescents not to compare is unlikely to be successful [11]. During adolescence, a challenging phase of maturation, social comparison provides a means of gathering information about the social world. Adolescents need to develop a sense of personal and social identity and adjust to bodily changes [12]. The present study aimed to address the following questions to gain

¹School of Healthcare Sciences, College of Health and Behavioural Sciences, University of Wales, Bangor LL57 2EF, UK and ²School of Psychology, College of Health and Behavioural Sciences, University of Wales, Bangor LL57 2AS, UK

*Correspondence to: A. Kraye.
E-mail: a.kraye@bangor.ac.uk

a better understanding of adolescents' experiences from their own perspective: which social comparison appraisals are used by adolescents in their everyday lives—with a particular reference to comparison appraisals in times of threat/uncertainty? What do adolescents compare on? Whom do adolescents compare to?

Social comparison theory

Research in the area of social comparison theory has shown that different comparison appraisals might be used depending on the context of the comparison [10]. Social comparison theory encompasses three types of appraisals: self-evaluation, self-improvement and self-enhancement. Self-evaluation comparisons are used to gather information about one's own standing in relation to others in terms of attributes, skills and social expectations (e.g. How do my muscles compare to my peers). Self-improvement comparisons are employed to learn how to improve a particular characteristic or for problem solving (e.g. How could I learn from her to be more attractive) [10]. In times of threat or uncertainty, self-enhancement comparisons protect self-esteem and self-worth and allow the individual to maintain positive views about the self [13–15]. Self-enhancement mechanisms identified in the research literature encompass discounting information as not relevant to the self and describing the other as inferior or less advantaged on a particular attribute one feels superior on (e.g. He might be muscular but he has no sense of humour) [10, 16].

A comparison target perceived as similar or relevant (e.g. in terms of age, sex or achievements) might have a greater impact on the outcome of the comparison than a dissimilar target [17, 18]. Additionally, individuals might naturally choose a different attribute on which to compare than that presented by the researchers and tend to selectively take into account various surrounding dimensions that are relevant to them [19, 20].

Social comparison and prevention

Research in the area of body image has mainly focused on evaluative comparisons as evaluation

is a central dimension of body image [21]. Treatments for eating disorders and body image dissatisfaction focus on challenging self-evaluations concerned with body shape and weight [22]. A body of work has established that evaluative comparisons are linked to negative outcomes [5, 23–25]. For example, Durkin and Paxton [23] established that evaluative comparisons to idealized female images significantly predicted negative affect in adolescent females. However, not all individuals reacted negatively to media images and messages and of particular interest in terms of prevention is an understanding of why some individuals are not affected [26].

Less work has gone into identifying the role of other aspects of comparisons. Some enhancement comparison processes might be protective and as such have implications for health promotion. Stice and Shaw [27] concluded in a meta-analysis that a focus on established risk factors such as idealized media images and building resilience to these pressures at the individual level might be most fruitful. Programmes that included cognitive interventions to alter maladaptive attitudes produced the most promising effects.

Social comparison, media, peers and body image perception

A review of the body image research literature suggests that there is limited knowledge of the use of the three different comparison appraisals in everyday lives. Research drawing on quantitative data analysis suggests that a high tendency towards evaluative comparisons with attractive targets is contributing to the internalization of a 'thin' ideal [24, 25] and mediates the effects of media on body dissatisfaction [28]. Findings suggest that body image dissatisfaction is an increasingly relevant issue for boys with the focus more likely to be on muscularity rather than weight [29–31]. Peers have been shown to be relevant comparison targets and important in making sense of media messages received [3, 32, 33]. Experimental evidence, manipulating mainly evaluative comparison appraisals, has shown that effects of social comparison processes may vary across different ages and for different comparison processes [4, 16, 23, 29, 34,

35]. For example, positive effects have been found for self-enhancement and self-improvement comparisons [16]. However, it has been suggested that improvement comparisons could lead to detrimental effects in the long term as these comparisons are based on a focus upon idealized images [36].

Importance and relevance attached to appearance or internalization of an idealized shape is particularly counterproductive. Research found that negative effects of idealized images on boys and girls are strongest for those with low levels of body satisfaction and high internalization of sociocultural standards [24, 29, 37]. These findings suggest that a better understanding of social comparison processes is crucial for understanding the effects of media images on body dissatisfaction [37].

Although a considerable body of work on body image in the last few years has focused on social comparison theory and its potential to illuminate the influence of media and peers on body image perception, very little qualitative work has been conducted. Not enough is yet known about the underlying process of how the individual interprets and makes sense of idealized media images in his/her everyday life. Thus, the aims of the present study were to describe the nature of social comparison processes mentioned spontaneously by boys and girls—with a particular focus upon enhancement comparisons.

Methods

The most critical requirement of the present study was to capture participants' own perceptions of and reactions to comparison targets. The method selected as most appropriate was a grounded theory approach based on the work of Strauss and Corbin [38, 39] and Dey [40]. Grounded theory focuses on social processes and social context [41] and is thus especially useful for the study of media. Although Glaser and Strauss [42] initially developed the approach to generate theory, it has been modified to accommodate the elaboration and modification of existing theories [39].

Two schools were approached to collect data from 12- to 14-year old children. The sample was

a convenience sample, in that interested participants were identified by teachers. A hierarchical consent procedure was used after institutional ethical approval had been granted. Head teacher's approval was sought before parents/guardians and then the adolescents themselves were approached. All received information outlining the nature and purpose of the study. The study topic was introduced as experiences with media with an emphasis on appearance. Adolescents were given the opportunity to discuss their potential participation with their parents/guardians before deciding to join the study.

Parents/guardians and participants were assured of confidentiality. All interviews were taped and additional notes made. The researcher transcribed the interviews, using guidelines adapted from Poland [43]. In the quotes included, dots with brackets indicate excluded irrelevant text, while dots without brackets note a pause in the narrative.

Twenty participants volunteered for the study (11 females and 9 males). Data were collected via one-to-one semi-structured interviews, lasting ~45 min each. The interviews took place in a private room in the school setting. Rapport was established through setting a positive tone, seeking information in depth, reflecting on what has been said, and closing the interview on a positive note [44]. Questions focused on specific themes such as types of media consumed (interest in particular sections of magazines, favourite programmes on television) and who with and messages received about physical and personal attributes. Questions were open ended and used to guide the interviews in keeping with the grounded theory approach. New questions were included based on issues emerging in interviews and data analysis. Examples of questions include: What do you like about teen magazines? How do you think magazines influence the way you would like to look? Would you talk with your friends about how people in magazines and on television look? Direct questions about comparisons were only asked towards the end of the interview as research has shown that direct questions might invoke social desirability concerns [20].

We analysed data based on the grounded theory approach as described by Strauss and Corbin [39]

and Dey [40]. NVIVO, a computer-aided analytic software package provided facilities to track searching and coding, sort and re-code and write memos. Collection and interpretation are cyclical, starting with line-by-line coding, which provide the basis for a more in-depth analysis and further data collection, increasing the depth of interpretation. The process is iterative and focuses on the participants' perceptions. The interviews were read line by line, asking sensitizing (e.g. What is happening here?) and theoretical questions (e.g. How does what this participant is saying connect to what has been said elsewhere?). Coding focused on incidents that demonstrated evidence of comparison appraisals in the data and the targets and attributes under comparison. Theoretical sampling, i.e. extending the sample in ways guided by the emerging theory, was not possible due to the nature of participant recruitment. This was managed by comparing incidents and events in terms of how these give density and variation to the concepts to which they relate [39]. Saturation was achieved for the sample in terms of sufficient details identified [45].

Results

The aim of this study was to explore social comparisons to idealized media images and messages with a focus on enhancement comparisons by adolescents. If a core category was drawn from the data, the results suggest that social comparison processes are used to inform 'identity development' (core category). Social information is used to define the self and establish norms and boundaries. Such processes are consistent with the notion that adolescence is a time of transition, when adolescents have to develop the self and shape an identity—defining boundaries and differentiating themselves from others [12]. In this context, body image is an important aspect of self-representation [3]. A series of factors were identified as influencing the process of comparison, namely the context in which the comparison occurs, sex and social support networks. Peers played an important role in making sense of the social information received and also as comparison targets.

Social comparison and peers

Participants generally indicated that weight and shape did not matter in a close friendship context.

I'm not really bothered about it, it does not matter. Some of my friends are a lot thinner than me but some are bigger, so ... (Girl, age 13)

They also expected friends to have very similar attitudes to themselves and to be reassuring.

I'm like yeah, I'm not good-looking, I'm fat, but like in school all my friends are like you look really nice. (Girl, age 12)

Nichter and Vukovic [46] coined the term 'fat talk' to describe self-disparaging body talk among close peers. This solicits reassurance and promotes group affiliation, but also emphasizes the value of thinness. Girls who do not engage in fat talk might be seen as perceiving themselves as superior or flawless [47].

Others outside the friendship group might be criticized and teased for their appearance and clothing [48].

Sometimes, but not really 'cause it's nasty, 'cause they could be talking about us, so. We just say if they look really bad, we just tell them. Cause it's better to know than walking around and looking stupid all day. (Girl, age 14)

Boys mentioned that girls were always concerned about appearance.

It's like a girl thing. It's like ... oh she is wearing some tight jeans she looks awful. (Boy, age 13)

Friends are important reference targets given the need to fit in with one's peer group and be accepted. This also means that more information is available about the other who is familiar and well known [3]. When asked, nearly all participants suggested that physique was not an important attribute, but that central friendship dimensions such as humour,

personality and trustworthiness were important. This strategy might be used to shift the emphasis from physical shape and size.

It's personality that's important, like you can trust your friends and have a laugh together. (Girl, age 13)

Not really, 'cause some of my friends they are like really funny, they are like really nice people. I would not look at them for looks really, 'cause there is people that I know that are like pretty, yeah, and they are just really big headed, so I just go for their personality, 'cause I like really funny people. (Girl, age 14)

Other examples of enhancing might be the following comments, which emphasize skills and comparing on a different attribute (clothes).

I don't think it is important to be tall and strong. Some tall people can do stuff that small people can't, but small people can do stuff tall people can't. (Boy, age 12)

Hm ... if I just feel like down, I just feel like ugly or whatever, I just compare myself to like people that look good, yeah. But I wouldn't never like say 'oh I look so much better than someone else', 'cause I never really do, ... 'cause I'm normally not really bothered. But I really like to dress not like everyone else. I really kind of like have my own style, that's what everyone else says, but 'cause I don't like, I don't like being the same. I like being a bit different, so, I'm just not really bothered. (Girl, age 13)

In addition, as described in the literature [47], appearance in terms of clothing and general style was perceived as a representation of the self-denoting group belonging and indicating ways of behaving:

The way you dress is like part of your personality, 'cause if people dress up all posh, people think they might be a bit snobby and if they dress

all punk, they might be scared of them. Whatever you wear comes into it, 'cause you want to know what people think if you hang around with someone. ... Like we [close friends] are all like wearing pink and people know we belong together. (Girl, age 13)

A strong focus on evaluative weight and height comparisons with friends was only found in some individuals. These respondents had difficulties in school either making friends and/or being generally accepted. They indicated that they would like to be taller and a different shape and perhaps they felt that this might make a difference to their acceptance by others:

I would like to be muscly, but ... I tried to do some exercises, like rugby and skateboarding, just trying to keep up. But it is just hard I do it 'cause I don't want to get picked on (...). And I would like to be tall, my friends are quite tall and I am short. (Boy, age 13)

My weight ... I would like to be thinner, but that is not always possible. And I love to be really tall. [Interviewer: What difference do you think that would make?] It would make a difference, because I get teased quite a lot in school. I'm changing school anyway because of that. 'Cause I just get picked on for being me. (Girl, age 12)

These comments are consistent with research which suggests that teasing is common in schools and that negative effects are more likely to be experienced by vulnerable boys and girls [49, 50].

Social comparison and the media

The media played an important role in all participants' lives as entertainment and to share with friends. Specific targets for comparison were chosen because they were perceived either as 'similar' (e.g. in age or faced with similar situations and decisions as the participant) or 'inspiring' in terms of having some characteristic the participant might want to develop or acquire. Participants mentioned talking about media personalities in school. Girls were more likely to talk about what media personalities

wore and how they looked and boys were more likely to mention sport performances. Both discussed television programmes.

We say things like, they look stupid, but if they want to wear it that's really their choice. (Girl, age 14)

As found in previous research [32] for girls, teen magazines and soap operas were of particular importance for learning about how other people cope with problems/challenges. Items were discussed with friends in ways that could be described as opportunities to learn about how others deal with problems and challenges:

I like the problem pages in magazines; they are interesting and sometimes helpful like if you can relate to someone's problem. They can give you good advice. (Girl, age 13)

Teen magazines provide suggestions in terms of clothes, make-up and general appearance and all girls indicated that they liked to have a look at these sections. These can be seen as examples of an improvement motive. Although it is arguable that these are reinforcing the norms of what girls/women should be like, most of the girls participating seemed to have a clear idea of what they liked and what they thought appropriate. Girls made comments about the inappropriateness of the fashion and style suggestions, which were seen as unrealistic for the 'average girl'.

I read the fashion tips, but they are just really stupid. It's like no one would wear that. I think it's 'cause they are like a lot older than teenagers and they think different things. Some of the things are good though and if I like it, I just go and buy it (...). There are also some decent hair tips, 'cause I love doing hair. (Girl, age 14)

Comparisons in terms of self-improvement can be inspiring if the other is not perceived to be a competitor [51]. Boys seemed to focus more on the development of physical skills and girls more on

personal development in terms of socially accepted behaviour and skills. Most of the boys were interested in skateboarding and football and they sought out information about how they could develop their skills. For example, one of the boys played football himself and liked and identified with a football player:

I like Ferdinand, 'cause he is a centre back and I am a centre back and I think he is really good (...). I watch all the matches to see how he does. (Boy, age 12)

Eh ... I would like to be fit and strong. Hm, I would like to do a lot of crazy stuff, like skateboarding and bikes and stuff like that (Boy, age 13)

Research has shown that boys are less likely to talk about their bodies and body image perceptions as this is seen as socially unacceptable and only concerns girls [52, 53]. Specifically, it was noted that boys place more importance on functionality than appearance which suggests that talking about sports may provide the framework to discuss personal physical attributes. Boys felt comfortable talking about their body in terms of attributes such as height, speed and strength associated with being successful at sports [52].

Boys were more reticent to admit that they compared with media images on physical attributes, but mentioned media personalities who were perceived as strong and attractive to the opposite sex (e.g. Mel Gibson, James Bond) when asked if there was someone they would like to be like.

I would like to be like Aragorn [Lord of the Rings]. He is like brave and the leader (...) and strong. [Interviewer: Do you want to be strong?] I suppose everyone, like most people want to be strong when they grow up, so I would not mind to be strong. (Boy, age 12)

Boys and girls were aware of the importance attached to the ideal body and appearance. This was particularly mentioned in relation to advertisements:

It's a good way to sell products, 'cause when you see someone like dead ugly, you just change channel. But when you see someone who is pretty or famous or whatever, you want to see what they are advertising. It's just you wanna see it. [Interviewer: Would that work for you?] No, but one of my friends just bought a lipstick 'cause she saw one of the famous people wearing it and I thought it was a bit stupid really. (Girl, age 13)

In accordance with previous research [32], participants indicated that the influence of advertisement was low for themselves and greater for others.

Incidents of enhancement/discounting were found particularly in relation to physique and appearance for all boys and girls. The data indicated that participants discounted weight- and shape-related comparisons by suggesting that different expectations applied to different individuals. These expectations were related to the similarity of the 'other'. Models and stars were described as dissimilar to oneself and thus the standards relevant to them were seen as inappropriate:

Models and stars are different. People expect different things, like different standards apply if you want to be famous. You behave differently. (Girl, age 13)

In contrast to friends and peers, models and stars were expected to have a certain appearance as this was seen as part of their role:

If you are maybe an actress it does matter. If you are a model it definitely does. And if you are a pop star it's quite important, although not as important as if you are like a model. (Girl, age 12)

Some of the older participants also pointed out that media personalities and models had help and were paid to look different.

I think these people are paid to look different. It is part of what they are. It's all show anyway. In real life they look nothing like it. (Boy, age 13)

Yeah, like people look good on TV and it's just 'cause all the stars got these make-up artists. (Girl, age 14)

Another example of enhancing when faced with media personalities might be the following comment, where the emphasis on appearance is shifted to personality.

I go for people with more personality, 'cause I think it's wrong to judge people by their looks. Some people might be like really pretty or handsome, but they might have the worst personality or something like that. (Girl, age 13)

Most girls talking about media personalities and models showed some ambivalence. On the one hand, gossip about and pictures of media personalities were seen as interesting and fun and models in magazines provided examples of current fashion, on the other hand girls had to negotiate and deal with the societal expectations that these transmit.

Yeah, I do [think about dieting] sometimes. I wouldn't really, but ... I would like to be a bit slimmer, but if you are like this size, then that's it. I'm not going to diet or nothing because people think I'm fat or something like that. 'Cause it's just, 'cause you feel like big when you're just normal against like a little skinny model or something like that, so. No I would not really change much. (Girl, age 13)

Although in general girls felt that weight and shape should not be important, girls in particular acknowledged that in certain situations it might be difficult to avoid comparisons. This was especially true if they generally felt unsure about themselves:

'Cause they [people in the media] are always thin and have perfect skin and stuff. They should really have people of different sizes. (...) 'Cause it makes me feel self-conscious, 'cause I see all these pretty people. It would be better to have a range of people. I don't think there is a point

in trying to lose weight, really, but it might make me more confident. (...) It's sometimes I feel a bit rotten and that's when it pops up. (Girl, age 13)

The girls who mentioned these feelings were asked if they would go on a diet. Most said that they would not as illustrated by this quote:

I'm not going to diet, because people think like I am fat or something like that ... I think that diets are really stupid. I think they just waste your time and they just waste your money. (Girl, age 14)

Nichter [47] found that girls were less likely to describe themselves as dieters or say that they were aiming to go on a diet in interviews than previous survey data suggests. Instead, she found that a large proportion of girls were 'watching' what they ate. This meant that girls felt more in control as they could decide when and where to watch their weight. Importantly, strategies included eating healthier and eating less junk food.

Discussion

As with previous research, the findings of the present study indicate that social comparison theory contributes to our understanding of adolescents' body image perceptions. It highlights that a better understanding of enhancement appraisals should be used to guide health promotion efforts on an individual's body image. The experiences elicited from participants emphasize the complexities involved in assessing influences and understanding the mechanisms through which they work. Given the opportunity, participants spontaneously recounted different social comparison appraisals, targets and attributes. Consistent with the literature, social comparisons are activated by situational cues (such as magazine reading) and associated with uncertainty [54–57].

Of particular interest in health promotion terms might be enhancement comparisons. Numerous experimental studies have shown that body dissatis-

faction was increased by viewing or reading appearance-focused material or being exposed to peer messages about thinness [5, 27, 34, 37]. In this context, perhaps one of the most important findings of the present study is that participants, when confronted with images that could be perceived as threatening, spontaneously mentioned constructive comparisons like enhancement, such as discounting the information by distancing themselves from the target or attribute (e.g. models and stars are different; it is others that worry about shape) and comparing on a different attribute (e.g. personal characteristics). In the present study, particular interest was focused on comparisons related to physical attributes. However, data suggest that a combination of personal and appearance-related characteristics were important for most participants. The choice of attribute depended on the similarity and relevance of the comparison other and the context and purpose of the comparison. Seeking to compare on attributes other than shape and size is an example of enhancement comparison [13, 20].

Research suggests that individuals might use constructive processes to counter threatening comparisons [10, 58, 59]. In accordance with previous research, the present study suggests that evaluative comparisons are more likely to produce negative effects [16, 60], whereas improvement comparisons could produce positive or negative effects. Improvement comparisons are more likely to have positive outcomes if the individual believes that they might attain the ideal and the other is not perceived as a competitor [61].

Participants' comments indicated an awareness of societal expectations and standards, but also a critical stance. It is impossible for adolescents to avoid comparisons altogether and it is suggested that enhancement comparisons might be protective when negotiating social expectations. Research in the area of prevention with adults, explicitly or implicitly using enhancement messages focusing on the unrealistic standard of ideal images, has shown promise [6, 8, 31, 62]. Recent studies focusing on adolescents have shown that when encouraged to challenge sociocultural norms, negative effects diminish [7, 63, 64]. For example, Wilksch *et al.* [7]

introduced a media literacy programme to adolescent boys and girls, which encouraged critical thinking. Pre- and post-intervention scores showed improvements for boys and girls on some of the subscales. Nonetheless, some research suggests that cognitively challenging idealized images may not have protective effects, but through an increase in cognitive processing focus attention on physical appearance [1, 32]. It has to be noted that enhancement comparisons have been operationalized in different ways in different studies. Engeln-Maddox [60] noted that ‘counter-arguments’ or enhancement thoughts listed by college women reflected different types of enhancement comparisons. She found evidence that positive outcomes were associated with counter-arguing, although not significantly. She proposed that enhancement appraisals differ and suggested that in particular a focus on attributes in which one perceives oneself as superior might be protective.

The mass media were found to be pivotal in adolescents’ lives as something to be enjoyed, shared and talked about with peers. Friends and peers played a significant role in making sense of and negotiating the messages and images received. The mass media expound physical norms and expectations of attractiveness, which adolescents need to negotiate [65]. During adolescence, peers become increasingly more important, not only in terms of the support and companionship they can provide but also in terms of creating, understanding and sharing opinions [66, 67]. Friends and media served as comparison targets for participants. Jones [3] suggests that friends and peers are more salient comparison targets for central attributes of close friendships than media celebrities and images, which is consistent with the present study. Physical comparisons were only mentioned by a few individuals. A possible explanation for this could be that the talk in the interviews focused on ‘close friends’. Wertheim *et al.* [68], in a study using semi-structured interviews with girls, also noted that no peer pressure was spontaneously reported during the interviews. Close friends, especially for girls, can provide a protective and supportive environment [66]. Participants mentioned that negative

remarks might be directed at other groups but that friends are very supportive when their own physical appearance was discussed. This might reinforce one’s own group affiliation and provide reassurance although it might reinforce physical standards [47, 49].

It is not possible from this study to suggest how often protective comparisons are made, or how they interact with evaluative shape comparisons, and what long-term effects they have. Feedback from girls suggests that negative evaluative comparisons were made in particular when mood or perception of confidence was low. Sim and Zeman [69] suggest that a normative level of body dissatisfaction exists. They found that body dissatisfaction alone was not sufficient to prompt disordered eating, but a decreased emotional awareness (ability to recognize and voice feelings) and deficiencies in coping. In agreement with previous research [22, 48, 49, 70, 71], participants who seemed to have difficulties with peer acceptance and/or a greater focus on physical attributes as salient mentioned negative experiences when comparing themselves.

Boys were more reticent to talk about physical comparisons. This is consistent with previous qualitative research, which suggests that boys are more likely to deny physical comparisons and describe body image as a ‘feminine or gay issue’ [52] and only discuss muscularity in the context of sports [53]. The present study used a mixed group to explore the use of social comparison appraisals in everyday life. The existence of sex differences was a recurrent theme. However, further research is needed in order to definitively characterize such sex differences.

There are other limitations to the present study. Being conducted with a small homogenous sample to explore the use of social comparison in adolescents’ own words limits the generalizability of the findings. Wood [20] points out that asking participants to self-report social comparisons might lead to inaccurate reporting due to a lack of awareness, social desirability/self-deception and problems in recall and selectivity. Efforts were made to address social desirability by creating rapport with participants and asking direct questions about comparison

towards the end of the interview. Some participants when asked directly if they compared themselves were either reticent about admitting comparisons or stated that they were unaware of making comparisons. Nonetheless, participants spontaneously voiced numerous comparisons throughout the previous phase of the interviews. Giving participants the opportunity for free response makes it more likely that naturally selected targets and comparison attributes were disclosed [72]. A study addressing social desirability bias found a small but significant correlation between social desirability scores and measures of disordered eating [73]. It was not possible from the present study to determine if the responses varied for adolescents with differing levels of body dissatisfaction. Future research is needed to examine possible differences in the type and frequency of social comparison appraisals used.

This study has important theoretical and preventive implications in the area of body dissatisfaction. The theoretical implication of the study is to demonstrate that different enhancement comparisons are used by adolescents such as discounting and comparing on a different dimension in the context of body image and media and peer messages. We suggest that further research, including measures of personal characteristics, is needed with adolescents to establish the effect of enhancement comparisons. Extending knowledge in the area of how comparisons are used by different individuals could provide insight into how interventions could be sensitive to individual variations. The present study suggests that comparisons with peers and media are closely interwoven, which might need to be taken into account in efforts to prevent behaviours that have a negative impact on health. It has been argued that even if individuals challenge the idealized image, they are often convinced that others 'buy' into these norms and that they will be judged by these standards [11, 32]. Changes in society are less likely to occur. Comparisons are unavoidable and might play an important part in negotiating societal norms for adolescents. Prevention efforts which teach individuals to challenge these images and unrealistic standards within their social context might

be particularly important. An example how this might apply to practice is an eating disorders prevention programme by Stice *et al.* [74] where girls engaged in verbal, written and behavioural exercises in which they critiqued the thin ideal. It is vital to focus on the facilitation of naturally occurring enhancement appraisals which might have a protective function. In particular, the ability of comparing on a different attribute one feels superior on and distancing oneself from the comparison other might be useful strategies when faced with idealized media images.

Acknowledgements

The authors thank the children, who volunteered to participate in this study, their parents and head teachers.

Conflict of interest statement

None declared.

References

1. Botta R. For your health? The relationship between magazine reading and adolescents' body image and eating disturbances. *Sex Roles* 2003; **48**: 389–99.
2. Cattarin JA, Thompson JK, Thomas C *et al.* Body image, mood, and televised images of attractiveness: the role of social comparison. *J Soc Clin Psychol* 2000; **19**: 220–39.
3. Jones D. Social comparison and body image: attractiveness comparisons to models and peers among adolescent girls and boys. *Sex Roles* 2001; **45**: 645–64.
4. Halliwell E, Dittmar H. The role of self-improvement motives in social comparison with idealised female bodies in the media. *Body Image* 2005; **2**: 249–61.
5. Tiggeman M, Slater A. Thin ideals in music television: a source of social comparison and body dissatisfaction. *Int J Eat Disord* 2003; **35**: 48–58.
6. Posavac HD, Posavac SS, Weigel RG. Reducing the impact of media images on women at risk for body image disturbance: three targeted interventions. *J Soc Clin Psychol* 2001; **20**: 324–40.
7. Wilksch SM, Tiggemann M, Wade TD. Impact of interactive school-based media literacy lessons for reducing internalisation of media ideals in young adolescent girls and boys. *Int J Eat Disord* 2006; **39**: 385–93.
8. Yamamiya Y, Cash TF, Melnyk SE *et al.* Women's exposure to thin-and-beautiful media images: body image effects of media-ideal internalization and impact-reduction interventions. *Body Image* 2005; **2**: 74–80.

9. Festinger LA. Theory of social comparison processes. *Hum Relat* 1954; **7**: 117–40.
10. Wood JV. Theory and research concerning social comparisons of personal attributes. *Psychol Bull* 1989; **106**: 231–48.
11. Strahan EJ, Wilson AE, Cressman KE *et al.* Comparing to perfection: how cultural norms for appearance affect social comparisons and self-image. *Body Image* 2006; **3**: 211–27.
12. Kroger J. *Identity in Adolescence. The Balance between Self and Other*, 2nd edn. London: Routledge, 1996.
13. Wood JV, Giordano-Beech M, Taylor KL *et al.* Strategies of social comparison among people with low self-esteem: self-protection and self-enhancement. *J Pers Soc Psychol* 1994; **67**: 713–31.
14. Thornton DA, Arrowood AJ. Self-evaluation, self-enhancement and the locus of social comparison. *J Exp Soc Psychol* 1966; **1**: S40–8.
15. Wood JV, Giordano-Beech M, Ducharme MJ. Compensating for failure through social comparison. *Pers Soc Psychol Bull* 1999; **25**: 1370–86.
16. Martin CM, Gentry JW. Stuck in the model trap: the effects of beautiful models in ads on female pre-adolescents. *J Advert* 1997; **26**: 19–23.
17. Miller DT, Turnbull W, McFarland C. Particularistic and universalistic evaluation in the social comparison process. *J Pers Soc Psychol* 1988; **55**: 908–17.
18. Lockwood P, Kunda Z. Superstars and me: predicting the impact of role models on the self. *J Pers Soc Psychol* 1997; **73**: 91–103.
19. Wheeler L, Koestner R, Driver RE. Related attributes in the choice of comparison others: it's there, but it isn't all there is. *J Exp Soc Psychol* 1982; **18**: 489–500.
20. Wood JV. What is social comparison and how should we study it? *Pers Soc Psychol Bull* 1996; **22**: 520–37.
21. Stice E, Bearman SK. Body image and eating disturbances prospectively predict growth in depressive symptoms in adolescent girls: a growth curve analysis. *Dev Psychol* 2001; **37**: 597–607.
22. Bornholt L, Brake N, Thomas S *et al.* Understanding affective and cognitive self-evaluation about the body for adolescent girls. *Br J Health Psychol* 2005; **10**: 485–503.
23. Durkin SJ, Paxton SJ. Predictors of vulnerability to reduced body image satisfaction and psychological wellbeing in response to exposure to idealised female media images in adolescent girls. *J Psychosom Res* 2002; **53**: 995–1005.
24. Morrison TG, Kalin R, Morrison MA. Body-image evaluation and body-image investment among adolescents: a test of sociocultural and social comparison theories. *Adolescence* 2004; **39**: 573–91.
25. Schutz HK, Paxton SJ, Wertheim EH. Investigation of body comparison among adolescent girls. *J Appl Soc Psychol* 2002; **39**: 1906–37.
26. Polivy J, Herman CP. Sociocultural idealisation of thin female body shapes: an introduction to the special issue on body image and eating disorders. *J Soc Clin Psychol* 2004; **23**: 1–6.
27. Stice E, Shaw H. Eating disorders prevention programs: a meta-analytic review. *Psychol Bull* 2004; **130**: 206–27.
28. Van den Berg P, Thompson KJ, Obremski-Brandon K *et al.* The tripartite influence model of body image and eating disturbance: a covariance structure modelling investigation testing the mediational role of appearance comparison. *J Psychosom Res* 2002; **53**: 1007–20.
29. Humphreys P, Paxton S. Impact of exposure to idealised males images on adolescent boys' body image. *Body Image* 2004; **1**: 253–66.
30. McCabe MP, Ricciardelli LA, Finemore J. The role of puberty, media and popularity with peers on strategies to increase weight, decrease weight and increase muscle tone among adolescent boys and girls. *J Psychosom Res* 2002; **52**: 145–53.
31. Thompson JK, Stice E. Thin-ideal internalisation: mounting evidence for a new risk factor for body image disturbance and eating pathology. *Curr Dir Psychol Sci* 2001; **10**: 181–3.
32. Milkie MA. Social comparisons, reflected appraisals, and mass media: the impact of persuasive beauty images on black and white girls' self-concepts. *Soc Psychol Q* 1999; **62**: 190–210.
33. Paxton SJ, Schutz HK, Wertheim EH *et al.* Friendship clique and peer influences on body image concerns, dietary restraint, extreme weight-loss behaviours, and binge eating in adolescent girls. *J Abnorm Psychol* 1999; **108**: 255–66.
34. Hargreaves DA, Tiggemann M. Idealised media images and adolescent body image: comparing boys and girls. *Body Image* 2004; **1**: 351–61.
35. Presnell K, Bearman SK, Stice E. Risk factors for body dissatisfaction in adolescent boys and girls: a prospective study. *Int J Eat Disord* 2004; **36**: 389–401.
36. Clay D, Vignoles VL, Dittmar H. Body image and self-esteem among adolescent girls: testing the influence of sociocultural factors. *J Res Adolesc* 2005; **15**: 451–77.
37. Groesz LM, Levine MP, Murnen SK. The effect of experimental presentation of thin media images on body satisfaction: a meta-analytic review. *Int J Eat Disord* 2002; **31**: 1–16.
38. Strauss A, Corbin J. Grounded theory methodology. An overview. In: Denzin NK, Lincoln YS (eds). *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage, 1994, 273–85.
39. Strauss A, Corbin J. *Basics of Qualitative Research. Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks, CA: Sage, 1998.
40. Dey I. *Grounding Grounded Theory. Guidelines for Qualitative Inquiry*. San Diego, CA: Academic Press, 1999.
41. Morse JM. Designing funded qualitative research. In: Denzin NK, Lincoln YS (eds). *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage, 1994, 220–35.
42. Glaser BG, Strauss AL. *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago, IL: Aldine, 1967.
43. Poland BD. Transcription quality as an aspect of rigor in qualitative research. *Qual Inq* 1995; **1**: 290–310.
44. Charmaz K. Grounded theory. In: Smith J, Harre R, Van Langenhove L (eds). *Rethinking Methods in Psychology*. London: Sage, 1995, 27–49.
45. Cresswell JW. *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. Thousand Oaks, CA: Sage Publications, 1998.
46. Nichter M, Vukovic N. Fat talk: body image among adolescent girls. In: Sault N, (ed.). *Many Mirrors: Body Image and Social Relations*. New Brunswick, NJ: Rutgers University Press, 1994, 109–31.
47. Nichter M. *Fat Talk: What Girls and Their Parents Say about Dieting*. Cambridge, MA: Harvard University Press, 2000.

48. Jones DC, Newman JB, Bautista SA. Three-factor model of teasing: the influence of friendship, gender, and topic on expected emotional reactions to teasing during early adolescence. *Soc Dev* 2005; **14**: 421–39.
49. Jones DC, Crawford JK. The peer appearance culture during adolescence: gender and body mass variations. *J Youth Adolesc* 2006; **2**: 257–69.
50. Jones DC, Vigfusdottir T, Lee Y. Body image, internalisation, and the appearance culture among adolescent girls and boys: conversations, criticism, and appearance magazines. *J Adolesc Res* 2004; **19**: 323–39.
51. Brickman P, Bulman RJ. Pleasure and pain in social comparison. In: Suls JM, Miller RL (eds). *Social Comparison Processes: Theoretical and Empirical Perspectives*. Washington, DC: Hemisphere, 1977, 149–86.
52. Hargreaves DA, Tiggemann M. Body image is for girls' a qualitative study of boys' body image. *J Health Psychol* 2006; **11**: 567–76.
53. Ricciardelli LA, McCabe PM, Ridge D. The construction of the adolescent male body through sport. *J Health Psychol* 2006; **11**: 577–87.
54. Buunk BP. Social comparison processes under stress: towards an integration of classic and recent perspectives. In: Stroebe W, Hewstone M (eds). *European Review of Social Psychology*. Chichester, UK: Wiley, 1994, 211–41.
55. Gibbons FX, Buunk BP. Individual differences in social comparison: development of a scale of social comparison orientation. *J Pers Soc Psychol* 1999; **76**: 129–42.
56. Wills TA, Suls J. Commentary: neo-classical comparison and beyond. In: Suls J, Wills TA (eds). *Social Comparison: Contemporary Theory and Research*. Hillsdale, NJ: Erlbaum, 1991, 395–411.
57. Wood JV, Taylor SE, Lichtman RR. Social comparison in adjustment to breast cancer. *J Pers Soc Psychol* 1985; **49**: 1169–83.
58. Goethals GR, Klein MP. Interpreting and inventing social reality: attributional and constructive elements in social comparison. In: Suls J, Wheeler L (eds). *Handbook of Social Comparison. Theory and Research*. New York: Kluwer Academic, 2000, 23–44.
59. Tesser A. Self-evaluation. In: Leary MR, Price Tangney J (eds). *Handbook of Self and Identity*. New York: The Guilford Press, 2003, 275–91.
60. Engeln-Maddox R. Cognitive responses to idealised media images of women: the relationship of social comparison and critical processing to body image disturbance in college women. *J Soc Clin Psychol* 2005; **24**: 1114–38.
61. Evans PC. If only I were thin like her, maybe I could be happy like her: the self-implications of associating a thin female ideal with life success. *Psychol Women Q* 2003; **27**: 209–14.
62. Stice E, Mazotti L, Weibl D *et al.* Dissonance prevention programme decreases thin-ideal internalisation, body dissatisfaction, dieting, negative affect, and bulimic symptoms: a preliminary experiment. *Int J Eat Disord* 2000; **27**: 206–17.
63. Stice E, Shaw H, Burton E *et al.* Dissonance and healthy weight eating disorder prevention programs: a randomised efficacy trial. *J Consult Clin Psychol* 2006; **74**: 263–75.
64. Wade TD, Davidson S, O'Dea JA. A preliminary controlled evaluation of a school-based media literacy program and self-esteem program for reducing eating disorder risk factor. *Int J Eat Disord* 2003; **33**: 371–83.
65. Becker AE, Hamburg P. Culture, the media, and eating disorders. *Cross Cult Psychiatry* 1996; **4**: 163–7.
66. Coleman JC, Hendry LB. The nature of adolescence. 3rd edn. *Adolescents and Society Series*. London: Routledge, 1999.
67. Hendry LB, Schucksmith J, Love JG *et al.* *Young People's Leisure and Lifestyle*. London: Routledge; 1993.
68. Wertheim EH, Paxton SJ, Schutz HK *et al.* Why do adolescent girls watch their weight? An interview study examining sociocultural pressures to be thin. *J Psychosom Res* 1997; **42**: 345–55.
69. Sim L, Zeman J. The contribution of emotion regulation to body dissatisfaction and disordered eating in early adolescent girls. *J Youth Adolesc* 2006; **35**: 219–28.
70. Halliwell E, Harvey M. Examination of a sociocultural model of disordered eating among male and female adolescents. *Br J Health Psychol* 2006; **11**: 235–48.
71. McCabe MP, Ricciardelli LA, Salmon J. Evaluation of a prevention program to address body focus and negative affect among children. *J Health Psychol* 2006; **11**: 589–98.
72. Bers SA, Rodin J. Social comparison jealousy: a developmental and motivational study. *J Pers Soc Psychol* 1984; **47**: 766–79.
73. Tilgner L, Wertheim EH, Paxton SJ. Effect of social desirability on adolescent girls' responses to an eating disorder prevention program. *Int J Eat Disord* 2004; **35**: 211–6.
74. Stice E, Shaw H, Wade E. Dissonance and healthy weight eating disorder prevention programmes: a randomised efficacy trial. *J Consult Clin Psychol* 2006; **74**: 263–75.

Received on February 9, 2007; accepted on October 15, 2007