The role of self-objectification in the mental health of early adolescent girls: Predictors and consequences

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Abstract

Objectives: The overall aim of the study was to investigate the applicability of Objectification Theory to the mental health of early adolescent girls, in particular, their dieting behaviours and depressive symptoms. Both predictors and consequences of self-objectification were examined. **Methods:** A sample of 204 girls with a mean age of 11.6 years completed questionnaire measures of media consumption, time spent on sports and hobbies, appearance conversations, self-objectification, body shame, dieting, and depressive symptoms. **Results:** Structural equation modelling showed that magazine and Internet exposure and appearance conversations with friends predicted self-objectification. Self-objectification itself predicted body shame, which in turn predicted both dieting and depressive symptoms, in accord with the pathways postulated by Objectification Theory. **Conclusions:** The results confirm that, as is the case with adult women, self-objectification plays a significant role in the mental health of early adolescent girls.

Keywords: adolescent girls; self-objectification; depression; dieting; body shame; media

The role of self-objectification in the mental health of early adolescent girls: Predictors and consequences

There is no doubt that women's bodies have become increasingly objectified and sexualized in contemporary Western media. More concerning still is the documented increase over time in the objectification and sexualization of younger women and girls. For example, the American Psychological Association (APA) 'Report of the APA Task Force on the Sexualization of Girls' (2007) points to the sexualized content of mainstream teen magazines, music videos and music lyrics, and to the trend toward sexy clothing marketed to adolescent and younger girls. Accordingly, the taskforce's first recommendation stresses the need for future research focusing specifically on the consequences for girls.

One particularly influential theory, Objectification Theory (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996), was developed precisely to provide a formal analysis of the consequences of living in a culture that sexually objectifies women and girls. The central tenet is that, through the pervasiveness of objectification, women and girls are gradually socialized to adopt an observer's perspective of their physical self. In other words, they come to view *themselves* as primarily an object to be looked at and evaluated on the basis of appearance. This perspective, termed 'self-objectification' (Fredrickson & Roberts, 1997), represents a form of self-consciousness characterised by habitual and constant monitoring of the body's external appearance and has a number of negative consequences, in particular increased shame and anxiety about the body. The theory argues that these negative experiences accumulate to put women at increased risk for eating disorders, unipolar depression and sexual dysfunction (Fredrickson & Roberts, 1997).

A number of Objectification Theory's propositions have now garnered a great deal of research support. In particular, self-objectification has been reliably linked to disordered eating in adult women, with a number of studies confirming that body shame at least partially mediates this relationship (see Moradi & Huang, 2008; Tiggemann, 2011, 2013, for reviews).

Although much less research has addressed the outcome of depression, this has likewise demonstrated links between self-objectification and depressive symptoms (see Tiggemann, 2011). Thus far, this research has been largely conducted with college-age women. However, it may be that adolescence, a time of great transition and identity formation, as well as of increased self-consciousness, preoccupation with image, and concern with social acceptance (Harter, 1999), presents a more important developmental period for self-objectification. In support, a few studies have now shown that self-objectification is likewise linked to body shame and disordered eating in mid-adolescent (13-16 years) girls (Harrison & Fredrickson, 2003; Knauss, Paxton & Alsaker, 2008; Slater & Tiggemann, 2002, 2010). In the only younger sample of 10-12 year-old girls (M = 11.2 years) studied to date, self-objectification was related to body shame (Lindberg, Hyde & McKinley, 2006) and prospectively predicted depressive symptoms two years later (Lindberg, Grabe & Hyde, 2007). This latter finding points to early adolescence (10-12 years) as a potentially critical time.

Thus the first aim of the present study was to test the general model proposed by Objectification Theory (Fredrickson & Roberts, 2007) in a sample of early adolescent girls. Here we investigated the outcomes of dieting (as a measure of unhealthy eating) and depressive symptoms in a single coherent model. Dieting has been associated with a host of negative outcomes, including low self-esteem and suicidal ideation in adolescent girls, and is a demonstrated prospective predictor of the onset of clinical eating disorders (Stice, Marti & Durant, 2011). Likewise, depressive symptoms in adolescent girls have been identified as the strongest risk factor for the onset of an episode of major depression (Seeley, Stice & Rohde, 2009). Although Objectification Theory conceptualizes these as potential outcomes of the same underlying causal condition (the experience of self-objectification), they have not been modelled together. According to the objectification model, self-objectification will lead to body shame, which will in turn lead to both dieting and depressive symptoms. In other words,

body shame is predicted to mediate the effect of self-objectification on dieting and depressive symptoms.

While a great deal of research has focused on the consequences of self-objectification (mostly in adult women), relatively little research has addressed predictors (in any age group). Thus the second aim of the present study was to begin the investigation of potential predictors of self-objectification in early adolescent girls, critical for the formulation of age-appropriate and targeted interventions. Individual predictors that have been identified in older adolescents are the watching of music television (Grabe & Hyde, 2009), time spent on the Internet (Tiggemann & Miller, 2010, Tiggemann & Slater, 2013) and peer sexual harassment (Lindberg et al., 2007), while participation in sports has been identified as a protective factor (Harrison & Fredrickson, 2003; Slater & Tiggemann, 2012). These findings are consistent with the underlying logic of Objectification Theory, whereby circumstances or experiences that accentuate an awareness of an observer's perspective and/or the importance of external appearance should lead to increased self-objectification. In contrast, circumstances or experiences that emphasize instead body functionality should result in decreased self-objectification.

In the present younger age group, we chose to investigate a broad range of everyday activities that girls engage in, rather than more extreme external events (e.g., sexual harassment). In particular, we focused on media consumption, sport and hobbies, and participation in appearance conversations. While a few studies have demonstrated links between media consumption and negative body image or disturbed eating among early adolescent girls (Sands & Wardle, 2003; Clark & Tiggemann, 2007), none have investigated the role of self-objectification. With respect to sport, Slater and Tiggemann (2012) found that time spent playing organised sports (such as soccer, netball and athletics) was prospectively related to lower self-objectification one year later in a sample of mid-adolescent girls. We reasoned here that participation in other engaging activities (e.g., playing a musical

instrument) might also serve to decrease the focus on external appearance and likewise be related to reduced self-objectification. The final predictor examined was engagement in appearance conversations with friends. These have been linked to body dissatisfaction in adolescent girls (Clark & Tiggemann, 2006; Jones, Vigfusdottir & Lee, 2004; Lawler & Nixon, 2011), but no study has investigated their relationship with self-objectification. Adolescent girls spend a great deal of time talking with their friends (Berndt & Keefe, 1995) and Jones (2004) has argued that everyday appearance conversations serve to direct attention to appearance-related issues and reinforce the importance of appearance ideals. Thus we reasoned they would contribute to self-objectification.

In sum, the overall aim of the present study was to examine the applicability of Objectification Theory to the experience of early adolescent girls. For the first time a number of potential predictors and potential consequences of self-objectification were investigated in a single integrated model. It was predicted that media consumption (magazines, television, Internet) and appearance conversations would (positively) predict self-objectification, while participation in sport or other engaging activities would be related to reduced self-objectification. In accord with the pathways set out in Objectification Theory (Fredrickson & Roberts, 1997), self-objectification was then predicted to lead to body shame, which would in turn lead to both dieting and depressive symptoms.

Method

Participants

Participants were 204 girls in the last two years of primary school (Year 6, $n = 99$, and Year 7, $n = 103$) at eight Catholic primary schools in metropolitan Adelaide, the capital city of South Australia. Most of the girls (92.1%) were aged 11 years ($n = 84$) or 12 years ($n = 103$); 1.0% were 10 years and 6.9% were 13 years old. Their mean age was 11.64 years ($SD = 6.52$). BMI (based on self-reported height and weight) was available for 84% of the sample. Based on international age-specific cut-offs (Cole et al., 2000), 80% of the sample could be

categorized as normal weight, 13% overweight, and 3.5% each underweight and obese. Socioeconomic status, as calculated from girls' postcodes (Index of Relative Socioeconomic Disadvantage, ABS, 2008), indicated a wide spread (decile range = 1-10) with a mean of 5.65 (*SD* = 2.86), i.e., "middle class". Although ethnicity was not explicitly reported, the overwhelming majority of students attending these schools are Caucasian. A language other than English was regularly spoken in 18.5% of homes, with the most common languages being Italian (4.4%), followed by Vietnamese (2.9%).

Measures

Media consumption. As previous studies have cautioned that different media forms may act somewhat differently in their relation to body image (Tiggemann, 2003), separate measures for television, magazine and Internet consumption were calculated.

Television. Following Clark and Tiggemann (2006), participants were provided with a list of 16 television programs derived from television ratings (OzTAM, 2009) as well as four general categories of program (Award shows, Music television, News, Sports). They were asked to indicate how frequently they watched each program on a 3-point scale: *never* (0), *sometimes* (1), *almost every time it's on* (2). Previous research has indicated that it is not the total amount of television watched, but rather the specific genres viewed (e.g., soap operas and music videos) that is critical to adolescent body image (Borzekowski, Robinson & Killen, 2000; Tiggemann, 2005b). Accordingly, scores were calculated as the mean frequency per genre: teen drama (e.g., *Gossip Girl*); soaps (e.g., *Neighbours*); reality shows (e.g., *Bondi Rescue, The Biggest Loser*); music videos (*Video Hits, Rage*); other entertainment (e.g., *The Simpsons*); and non-entertainment (*News, Sports*).

Magazines. Participants were similarly provided with a list of 15 popular girls magazines available at the local newsagency and based on current readership ratings (Roy Morgan, 2010), plus generic Women's (e.g., *Women's Day*) and Fashion (e.g., *Vogue, Cleo*)

magazine categories. Girls rated how often they read each of the magazines on a 3-point scale: *never* (0), *sometimes* (1), *almost every time it comes out* (2). As Dohnt and Tiggemann (2006) found the reading of teen and women's, but not children's, magazines to be related to dieting awareness, magazines were classified on the basis of their stated target audience: children's magazines (e.g., *K-Zone, Disney Girl*), teen magazines (*Dolly, Girlfriend*), and women's magazines (women's, fashion magazines).

Internet. Participants were asked how long on average they spent on the Internet each day (not for homework): *none*, *30 min or less*, *about 1 hour, about 2 hours, about 3 hours, about 4 hours, about 5 hours, 6 hours or more*. This was asked separately for during the week and weekend, and then averaged (r =.60, p<.001). As recent research has identified social networking sites like Facebook as important sources of appearance ideals for young adults and adolescents (Mabe, Forney & Keel, 2014; Tiggemann & Slater, 2013), participants were also asked whether or not they had a Facebook or MySpace profile, and if so, how much time they spent there. These two times were then summed.

Sports and hobbies. Participants were asked about their involvement in eight different outside-school activities. They were asked if they participated in the activity and if so, how many hours per week they spent on the activity. Time spent on sports was calculated by summing time per week on organized sport (e.g., soccer) and fitness activities (e.g., running, riding bike). Time spent on hobbies and other activities was calculated by summing the times per week on the other six activities (learning a musical instrument, drama, singing, art/craft, belonging to a church group, or belonging to another group, e.g., Scouts).

Appearance conversations with friends. Appearance conversations were assessed by Clark and Tiggemann's (2006) adaptation of the scale developed by Jones et al. (2004) for older adolescents. Here the scale consisted of 8 items beginning with the stem "My friends and I talk about…" that addressed aspects of appearance (e.g., "clothes and make-up", "what

we can do to look our best"). There were three response options: *no* (1), *sometimes* (2), *a lot* (3). These items were interspersed with non-appearance conversation topics, e.g., "school work and homework". Scores were summed to produce a total ranging from 8 to 24, with higher scores indicating greater engagement in appearance conversations with friends. Clark and Tiggemann (2006) reported correlations with peer norms and adequate internal reliability for this scale in a sample of 9-12 year-old girls (α =.78). In the present sample, internal reliability was a little higher (α =.85).

Self-objectification. Self-objectification was assessed by the Surveillance Scale of the Objectified Body Consciousness Scale-Youth (Lindberg et al., 2006). This scale consists of 4 items that address body focus or the extent to which girls think about their body more in terms of how it looks than how it feels (e.g., "During the day, I think about how I look many times"). Responses are made on a 7-point Likert scale from *strongly disagree* (1) to *strongly agree* (7). Total scores range from 4 to 28, with higher scores indicating a greater focus on the appearance of the body. Lindberg et al (2006) designed the scale for use with 10-12 year-olds and demonstrated good construct validity and high internal consistency in this age group (α =.88). In the present sample, internal reliability was similarly high (α =.85).

Body shame. Body shame was similarly assessed by the Body Shame subscale of the Objectified Body Consciousness Scale-Youth (Lindberg et al., 2006). This consists of 5 items (e.g., "I feel like I must be a bad person when I don't look as good as I could") rated on the same 7-point scale. Total scores range from 5 to 35, with higher scores representing greater body shame. Lindberg et al. (2006) reported good construct validity and adequate internal consistency in their sample (α =.79). In the present sample, internal reliability was a little higher (α =.83).

Dieting. Following Clark and Tiggemann (2007), three simple questions were used to ask about dieting behaviour. The first two ("Do you watch exactly what you eat?"; "Do you

try to eat less at meal times than you would like to eat?") were taken from the validated Dutch Eating Behavior Questionnaire (van Strien, Frijters, Bergers & Defares, 1986) and had three response options *no* (0), *sometimes* (1), *yes* (2). The final question asked directly "Have you ever been on a diet to lose weight?": *no* (0), *yes - but not now* (1), *yes – right now* (2). Such simple single-item questions have most commonly been used to assess dieting status in children. Here responses to the three items were summed. Clark and Tiggemann (2007) reported that their measure correlated significantly with desire to be thinner in a similar-age sample. In the present sample, internal reliability (α =.54) was considered adequate for a scale with only three items, as indicated by the mean inter-item correlation of .29 (optimum .2< *r* <.4; Briggs & Cheek, 1986).

Depressive Symptoms. Depressive symptoms were assessed by the short form of the well-validated Childrens' Depression Inventory (Kovacs, 1992), designed for school-aged children and adolescents. Each of the 10 items consists of three choices keyed in increasing severity, and children are asked to select the option that best describes them over the past two weeks. An exemplar item is: *I am sad once in a while* (0); *I am sad many times* (1); *I am sad all the time* (2). Here items were summed and used as a continuous measure ranging from 0 to 20, as appropriate for non-clinical samples (Lindberg et al., 2007). Kovacs (1992) reported a high correlation of the short form with the full scale score (*r* = .89) and adequate internal reliability (α =.80). In the present sample, internal reliability was very similar (α =.79).

Procedure

The protocol was approved by the Institutional Research Ethics Committee and the Catholic Education Office. A Letter of Introduction and consent form were sent home to the parents of girls in Years 6 and 7 (the last two years of primary schooling in South Australia) via their daughters. Parental consent was obtained for 63.0% of girls. Girls also signed their

own assent to participate. The questionnaire was administered in small groups during normal class time and took approximately 30 minutes to complete.

Data Analysis

Zero-order relationships between postulated predictors (media, activities, appearance conversations) and self-objectification were examined by a series of correlations; likewise for the postulated consequences of self-objectification (body shame, dieting, depressive symptoms). An alpha level of .05 was adopted to determine statistical significance. An integrated structural model containing both postulated predictors and consequences was then constructed and tested. Media consumption (magazines, television, Internet), sports and other activities, and appearance conversations were set to precede self-objectification. In accord with the predictions of Objectification Theory, self-objectification was set to lead to body shame, which was in turn set to lead to both dieting and depressive symptoms. BMI was not included in the model due to concerns about the reliability of self-reported height and weight, and the large number of missing values (16%). The proposed model was tested by structural equation modelling (AMOS Version 20) using bootstrapping (1,000 bootstrap samples) to allow for multivariate non-normality. Magazines, television and internet were treated as correlated latent variables (indicated by appearance-related genres), as was Activities. All other variables were measured variables. The few missing values were handled by substitution of the mean scale score. The adequacy of model fit was evaluated by the Bollen-Stine bootstrap probability and indicators recommended by Hu and Bentler (1999). Finally, the indirect effects of self-objectification on dieting and depressive symptoms through the proposed mediator of body shame were formally tested. In this approach, mediation is significant if the 95% bias-corrected confidence interval (CI) of the indirect path does not contain zero.

Results

Media Consumption and Self-Objectification

Of the list of television programs presented to the girls, the most watched program was *Glee* (teen drama; 53.2% of girls watched this 'almost every time it's on'). By far the most popular magazines were the teen magazines *Girlfriend* (24.8% of girls reported reading this 'almost every time it comes out') and *Dolly* (20.3%). The girls used the Internet (not for homework) for an average of 1.65 hours (*SD*=1.53) on a week day and 1.77 hours (*SD*=1.59) on the weekend. Just under half (43.6%) had a Facebook profile; fewer (14.7%) had a MySpace profile. Across the sample, average time per day spent on these social networking sites was 42.86 minutes (*SD*=78.30).

Table 1 provides the correlations between the different genres of television, magazines and Internet, and self-objectification. It can be seen that the watching of teen dramas and reality shows was positively related to self-objectification. For magazines, the reading of teen magazines and women's magazines was significantly related to self-objectification. Finally, both time spent on the Internet in general and on the social networking sites of MySpace and Facebook was associated with self-objectification.

Sports and Hobbies and Self-Objectification

Of the activities listed, the majority of girls participated in organized sport (71.6%) and fitness activities (72.9%). The most common non-sporting activity was learning a musical instrument (30.7%). Across the sample, girls spent an average of 3.29 hours (*SD*=3.04) on sports and 1.52 hours (*SD*=2.37) on other activities per week. In contrast to prediction, Table 1 indicates that neither type of activity was related to self-objectification.

Appearance Conversations with Friends and Self-Objectification

Of the topics listed, girls spent most time talking about 'things that happen on the weekend' (47.0% said 'a lot'). The most common individual appearance-related topic was

'clothes and make-up' (16.3%). Table 1 shows that engaging in appearance conversations with friends was strongly correlated with self-objectification.

Consequences of Self-Objectification

Table 1 also displays the means for self-objectification and its postulated consequences. The mean scores for self-objectification and body shame are similar to those reported by Lindberg et al. (2006). Further, it can also be seen that the sample as a whole had low levels of dieting and depression.

As predicted by Objectification Theory, self-objectification was significantly correlated with all of body shame ($r = .70$, $p < .001$), dieting ($r = .36$, $p < .001$), and depressive symptoms ($r = .34$, $p < .001$). Body shame was correlated with both dieting ($r = .38$, $p < .001$) and depressive symptoms ($r = .49$, $p < .001$), and the latter two were themselves inter-correlated ($r = .34$, $p < .001$).

Test of Integrated Model of Objectification

The initial evaluation of the proposed integrated structural model proved a less than acceptable fit ($\chi^2(84) = 174.48$, $p < .001$, Bollen-Stine bootstrap p = .004, CFI =.87, TLI =.84, SRMR =.10, RMSEA =.07). Examination of standardised residual coefficients and modification indices suggested the inclusion of two additional pathways, from magazines and from Internet to appearance conversations. When the model was re-evaluated with these additional paths, model fit improved significantly, $\Delta\chi^2(2) = 52.80$, $p < .001$, to an acceptable-to-good fit to the data ($\chi^2(82) = 121.69$, $p = .003$, Bollen-Stine bootstrap p = .130, CFI =.94, TLI =.93, SRMR =.06, RMSEA =.05).

The standardized path coefficients for the final model are presented in Figure 1. It can be seen that Internet and appearance conversations were directly related to self-objectification. Magazines and Internet were also related to self-objectification indirectly through appearance conversations, while Activities offered no prediction. In the second half

of the model, in support of Objectification Theory, self-objectification was associated with body shame, which was in turn associated with dieting and depressive symptoms. In particular, there were no other significant pathways to dieting or depressive symptoms. Tests of the indirect effects of self-objectification on dieting and depressive symptoms through the proposed mediator of body shame indicated that, consistent with prediction, there was a significant indirect effect of self-objectification on dieting through body shame, CI = [.036, .081]. There was also a significant indirect effect on depressive symptoms, CI = [.105, .209].

Discussion

The present study was designed in response to the call (APA, 2007) to extend the investigation of the experiences of objectification and self-objectification from adult women to adolescent and younger girls. In so doing, the study has made a contribution in three major ways. First, it has confirmed the predictions of Objectification Theory (Fredrickson & Roberts, 1997) in a sample of early adolescent (10-12 year-old) girls. Specifically, self-objectification was found to be associated with the postulated consequences of body shame, dieting and depressive symptoms. These findings extend those of the one previous investigation of this age group (Lindberg et al., 2006, 2007) by including both dieting and depressive symptoms in the one model. Second, in the first systematic attempt to assess likely predictors of self-objectification, it has identified media consumption and appearance conversations with friends as important predictors in this age group. Third, it has tested and confirmed an integrated model encompassing both postulated predictors and consequences of self-objectification to offer a more complex account of how self-objectification operates for early adolescent girls.

As a whole, the results well demonstrate the applicability of Objectification Theory to early adolescent girls. In particular, the specific links proposed by Objectification Theory were confirmed, with the structural model showing that self-objectification was associated

with body shame, which was in turn associated with dieting and depressive symptoms. The observed mediation by body shame is consistent with findings for the outcome of disordered eating in adult women (Moradi & Huang, 2008) and older adolescents (Slater & Tiggemann, 2010). Thus the consequences of self-objectification appear to operate in much the same way for early adolescent girls as they do for adult women. The finding that self-objectification and its consequences are already pertinent to girls as young as 10 or 11 years old offers a sad reflection on contemporary values.

Importantly, the present study investigated two different outcomes, unhealthy eating (in this case dieting) and depressive symptomatology, within the same framework. Thus the study adds to the very few studies (conducted only with adult women) that have likewise shown self-objectification to contribute to both disordered eating and depressive symptomatology (Tiggemann & Kuring, 2004; Tiggemann & Williams, 2012). This has important clinical implications. Objectification Theory offers a cogent explanation for the frequently observed co-morbidity between eating orders and depression (American Psychiatric Association, 2013). Although we investigated sub-clinical outcomes here, both dieting and depressive symptoms have serious implications for adolescent well-being. Not only do they serve to limit girls' lives concurrently, but they are the respective major risk factors for future clinical eating disorders and major depression (Seeley et al., 2009; Stice et al., 2011). More generally, the results suggest self-objectification may be a useful explanatory concept in the mental health of adolescents. It seems likely that a self-objectifying perspective will have far-reaching consequences that go beyond any specific diagnostic category and may influence many aspects of the everyday lives of adolescent girls. Future research might usefully address the clinical utility of explicitly assessing self-objectification in adolescent girls.

The present study also sought to begin the examination of a range of potential predictors of self-objectification in early adolescents. Just as for body image in general (e.g.,

Borzekowski et al., 2000), different media genres were found to be differentially related to self-objectification. In particular, for television, the watching of teen dramas and reality shows, genres that share the twin characteristics of providing explicit appearance ideals and presenting a sense of "realness" (Barbatsis & Guy, 1991), emerged as significant predictors. For magazines, the reading of teen and women's magazines were related to self-objectification, not surprising given their content in terms of idealized and potentially objectified images of women. In contrast, the reading of age-appropriate (children's) magazines were not. Finally, both the time spent on the Internet in general, and on social networking sites like Facebook, was related to self-objectification, consistent with recent findings for older adolescents (Tiggemann & Miller, 2010, Tiggemann & Slater, 2013). When all media sources were considered together, the Internet emerged as the only unique predictor. This may be due to "the changing nature of the media landscape" (Bair et al., 2012), in which the Internet may be used to read magazines and watch television shows on-line. In addition, social networking sites, with their emphasis on sharing photos, are liable to intensify the focus on appearance (Mabe et al., 2014).

However, the single strongest predictor of self-objectification was peer appearance conversations. Girls who reported engaging in more frequent conversations about appearance with their friends also reported greater self-objectification. Although appearance conversations have been linked to body dissatisfaction in a few previous studies (Jones et al., 2004; Lawler & Nixon, 2011), the present finding with respect to self-objectification is novel. Given the importance of friendships to adolescent girls (Berndt & Keefe, 1995), it is not surprising that the content of their conversations will be influential in what they consider important and how they see themselves. Thus, as pointed out by Jones (2004), conversations about appearance will surely increase the relative focus on appearance, the major hallmark of self-objectification. The importance of peers is further highlighted by the additional pathways added to the structural model to improve model fit, those from magazine and

Internet exposure to appearance conversations. These pathways extend one previous finding with this age group (Clark & Tiggemann, 2006) that appearance conversations partially mediated the relationships between appearance media exposure (magazines, television) and peer appearance norms and internalization of thin ideals. More generally, it has been suggested that much of everyday adolescent life unfolds in the context of peers (Jones et al., 2004). Thus media-presented ideals may become translated into peer norms through talking with friends. In particular, it is likely that girls will talk about what they read in magazines, watch on television, or see on the Internet. Thus, just like their older counterparts, early adolescent girls appear to be embedded in what Jones et al. (2004) have termed an "appearance culture", consisting of interrelated media and peer influences that reinforce each other.

Against prediction, time spent on sport or other engaging activities (hobbies) was not related to self-objectification. This may be a function of methodological issues, in that the activities listed may not have been sufficiently comprehensive or differentiated. It is also possible that any effect of sport or hobbies may require more time to become evident. In a recent study of mid-adolescent girls, Slater and Tiggemann (2012) found that time spent playing sport was not related to current self-objectification, but importantly, was a significant prospective predictor of lower self-objectification one year later. Girls who did not play sport increased in self-objectification over the time period; girls who played sport did not. The effects of engaging in hobbies or other meaningful activities may similarly require tracking over some time to determine any potential benefit.

The present results have a number of practical implications for clinicians, parents and educators. Self-objectification, the crux of Objectification Theory, has been shown to be a critical concept in the well-being of early adolescent girls with potentially far-reaching consequences. Thus targeting self-objectification by helping girls resist the harmful societal pressures to objectify their own bodies is of critical importance. Impett, Henson, Breines,

Schooler and Tolman (2011) have suggested programs should aim to shift girls' focus from how their bodies look (external appearance) to how they feel (functionality). In addition, educational strategies could explicitly teach girls about the existence of sexual objectification and its consequences. The fact that contemporary Western society is constructed in such a way as to encourage girls to begin to look at and treat themselves as 'objects' (i.e., to self-objectify) is a powerful and subversive idea, but one that is not too difficult to explain or understand. Such education could be extended to parents and other care-givers.

The study has also identified two other potential targets for intervention: media consumption and peer appearance conversations. Media literacy programs that teach girls to critically analyse and challenge media images have shown some success in combating negative body image and disordered eating (e.g., Levine & Murnen, 2009). In addition, parents should attempt to ensure the age-appropriateness of the media their daughters consume. For example, they might be advised to not buy teen magazines for their pre-teen daughters and to set limits on Internet use. However, the present results suggest that peers are even more influential than the media, in that media effects were largely indirect through conversations with friends. Thus media literacy programs might usefully be augmented by "peer literacy" programs, in which girls can be actively taught to critique appearance norms put forward by their peers and to not engage in appearance-based judgements of others or themselves. It may also be possible to harness the peer environment in creative ways to improve the effectiveness of interventions, for example, by assigning partners or identifying influential peers or leaders (Badaly, 2013). In particular, Paxton (1996) has suggested that activities conducted at the friendship group level might be especially helpful.

As in all studies, the above results need to be considered in the context of a number of limitations. First, the sample was recruited from Catholic primary schools in metropolitan South Australia. Although this sampling produced a wide range of socioeconomic status, future research should investigate more diverse samples in terms of religion, religiosity,

culture and ethnicity in other geographical locations, as well as clinical samples. Second, the measures of media consumption and engagement in sports and hobbies were purpose constructed for the present study and are of unknown validity. In particular, the latter were limited in the response categories offered. For example, it was not possible to determine whether sports played were individual or team-based, or their level of competitiveness. Third, it would have been useful to measure height and weight to obtain an objective measure of BMI for use as a covariate. Finally, although structural equation modelling can test the strength of causal connections assumed on the basis of an underlying theoretical model (here Objectification Theory), it is still essentially a correlational technique and thus cannot of itself determine causal direction. For example, although media consumption has been modelled as a predictor of self-objectification, it is also possible that girls high on self-objectification might seek out particular media; most likely both processes occur in a synergistic fashion. Longitudinal designs that track postulated predictors and consequences over some time are required for more definitive causal conclusions.

Despite the above limitations, the present study has made an important start in investigating predictors and consequences of self-objectification in early adolescent girls. It has confirmed the predictions of Objectification Theory concerning consequences in this sample and identified media consumption and appearance conversations as key predictors of self-objectification. In so doing, it has both contributed to theoretical understanding and identified targets for practical intervention. Self-objectification has been shown to be a very salient concept in contemporary early adolescent girls' lives. Given the documented increase in the sexualization and objectification of increasingly younger girls (APA, 2007), future research will need to address these issues in still younger samples.

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Table 1

Mean Scores, Standard Deviations, and Correlations with Predictors for Self-Objectification and Related Outcomes

	Self-Objectification	Body Shame	Dieting	Depressive Symptoms
Mean	13.45	13.00	1.68	2.65
SD	6.51	7.58	1.45	2.93
Scale range	4-28	5-35	0-6	0-20
Television				
Teen drama	.19**	.10	.17*	.09
Soap operas	.13	.03	.12	.13
Reality television	.21**	.12	.03	-.01
Music videos	.11	.12	.08	-.02
Other entertainment	.05	.03	.08	.11
News & Sports	-.05	-.10	.04	.00
Magazines				
Children's	-.10	-.01	.13	-.01
Teen magazines	.33**	.20**	.07	.09
Women's magazines	.25**	.20**	.16*	.08
Internet				
Internet time	.30**	.14*	.16*	.09
Facebook/Myspace	.36**	.27**	.34**	.19**
Sports and Hobbies				
Sport, physical	-.02	-.05	.10	.09
Other activities	.05	-.01	.02	.04
Appearance Conversations				
With Friends	.48**	.32**	.24**	.24**

* $p < 0.05$; ** $p < 0.01$

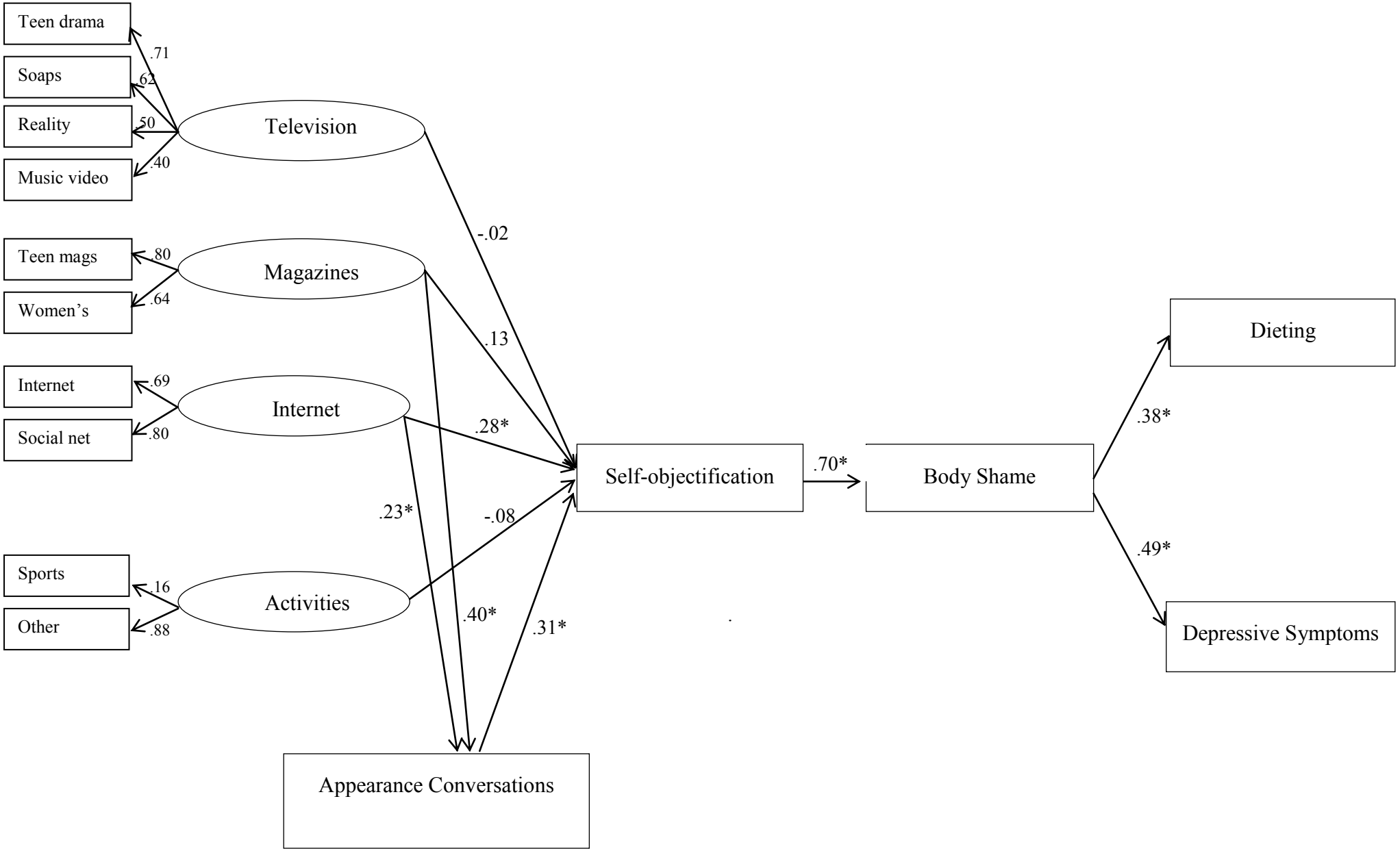

Figure 1.

Final structural model with standardized path coefficients; *$p < 0.05$