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Media Ideals and Other-Sex Peer Norms among Belgian Early Adolescents: Equating Self-Worth with Attractiveness

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Abstract

The purpose of this study was to investigate how total amount of television and magazine exposure and heterosocial involvement (i.e., mixed-sex interactions) relate to the endorsement of dysfunctional appearance beliefs. We anticipated a double dose effect in that exposure to media would be related to more dysfunctional appearance beliefs among those who are frequently involved in mixed-sex interactions. A total of 1976 early adolescent boys and girls ($M_{age} = 11.77$; $SD = 1.04$) participated in a cross-sectional study. Results indicated that the internalization of appearance ideals and appearance expectations of opposite-sex peers mediated the association between amount of television and magazine exposure and the endorsement of dysfunctional appearance beliefs. Heterosocial involvement did not, however, strengthen the influence of media exposure on early adolescents' body image.

Keywords: television, magazines, the internalization of appearance ideals, other-sex peer norms, dysfunctional appearance beliefs, early adolescents

Media Ideals and Other-Sex Peer Norms among Belgian Early Adolescents: Equating
Self-Worth with Attractiveness

Already at elementary school age, a considerable number of girls and boys are reporting body image concerns (Smolak, 2011). At the onset of adolescence such concerns become even more apparent due to many developmental changes that challenge early adolescents' sense of identity (Eccles, 1999). Being accepted among peers becomes an important goal during adolescence (Blakemore & Mills, 2014) and physical attractiveness has been shown to be an important factor in this peer acceptance (Vannatta, Gartstein, Zeller, & Noll, 2009). To learn about appearance norms, early adolescents rely on sociocultural sources, including mass media (Wertheim & Paxton, 2011). However, media messages frequently depict individuals complying with unrealistic appearance ideals. Research has related mass media exposure to body image disturbances which, in turn, predict eating disorder symptomatology (Thompson & Stice, 2001).

One such body image disturbance is the attribution of personal worth to one's physical appearance, or the endorsement of dysfunctional appearance beliefs (such as "my value as a person depends on how I look" and "how I look is a large part of who I am;" Spangler & Stice, 2001, p. 820). The present study's aims are, first, to examine whether early adolescents already report endorsing such dysfunctional appearance beliefs and to examine the role of exposure to television and magazines therein. Second, internalization and perceived appearance expectations of other-sex peers are investigated as possible underlying mechanisms explaining the media's influence on dysfunctional appearance beliefs. By examining the mediating role of other-sex expectations, this study will take into account the increasing importance of opposite-sex peers in early adolescents' lives (Arnett, 2013). Lastly, the current study will explore whether early adolescents receive a double dose of appearance-focused messages (through both media and peers) by examining the interactive influence of

media exposure and heterosocial involvement (i.e., involvement in mixed-sex group events) on body image.

Appearance Ideals in the Media and Body Image Disturbances

The mass media often depict individuals who comply with societal appearance ideals (e.g., Clark & Tiggemann, 2006). For women, the most salient aspect of an ideal appearance seems to be thinness (Wykes & Gunter, 2005). For men, the ideal appearance is broad and muscular, embodying physical power (Wykes & Gunter, 2005). Evidence exists on a link between exposure to ideal appearances and body image disturbances among adolescents. Meta-analyses of experimental studies, for instance, concluded on a small to moderate effect of exposure to idealized media portrayals of women on girls' and women's body image disturbances (Want, 2009) and a similar effect of exposure to the muscular male body ideal on men's body image disturbances (Barlett, Vowels, & Saucier, 2008). Correlational and longitudinal studies among adolescents and adults similarly concluded that exposure to mediated appearance ideals is associated with body image disturbances (Grabe, Ward, & Hyde, 2008; Ricciardelli, McCabe, Lillis, & Thomas, 2006). The current study aims to contribute to this line of research in four ways.

First, the association between media exposure and body image is examined among a younger sample (i.e., 10 to 15-year-olds). Notably, ideal appearances are prevalent in media content that is popular among early adolescents (e.g., Northup & Liebler, 2010), and young girls (9 to 11-year-olds) have been shown to be very aware of and motivated to emulate the ideal appearance that is embodied by their favorite celebrities (McGladrey, 2014). Cross-sectional and experimental studies already related exposure to appearance-focused television and magazines to early adolescent girls' body image concerns (Anschutz, Spruijt-Metz, Van Strien, & Engels, 2011; Clark & Tiggemann, 2007; Tiggemann & Slater, 2014).

Although literature suggests that the influence of media exposure on girls' body image

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is more normative (e.g., Knauss, Paxton, & Alsaker, 2007), boys experience pressure from sociocultural factors (e.g., peers, family, and the media) as well (Hargreaves & Tiggemann, 2004). For instance, based on individual interviews among 12- to 15-year-old boys, Ricciardelli, McCabe, and Banfield (2000) concluded that the media encourage boys to adopt body altering strategies, such as exercising. Hargreaves and Tiggemann (2004) also found that both boys and girls showed an increased negative mood and appearance comparison after being exposed to idealized commercials. One longitudinal study revealed that boys who perceived more pressure from parents, peers, and the media to either lose weight or gain muscles reported more body image concerns, eight and sixteen months later (Ricciardelli et al., 2006). Therefore, the current study will include girls as well as boys.

Second, most studies examined the influence of appearance-focused media content. However, considering the pervasiveness of appearance ideals in mass media, including adult television (Kim et al., 2007), teen television programs (Northup & Liebler, 2010), and magazines (Yan and Bissell, 2014), other studies have looked at the influence of total amount of television viewing or magazine reading on body image, regardless of which specific contents are consumed. Although some researchers were unable to find an association between total hours spent watching television and body image disturbances (e.g., Kirsh, 2010), Martínez-González et al. (2003) showed that frequency of reading teen magazines, but not amount of television exposure, predicted a higher risk of developing eating disorders among adolescent girls. Additionally, a survey study among early adolescent boys and girls found a positive association between total hours of weekly media exposure (i.e., television, video games, and internet) and body image concerns (Eyal & Te'eni-Harari, 2013). In their longitudinal study among 7-to 12-year-old girls, Harrison and Hefner (2006) also reported that total amount of television exposure, but not magazine exposure, significantly predicted a thinner future body ideal one year later.

These studies thus assume that exposure to idealized appearances across media formats and genres may be more important than exposure to specific media content in understanding the role of media in early adolescents' body image. This assumption resonates with the premise of cultivation theory (Gerbner, Gross, Morgan, & Signorielli, 1980), which argues that messages, images, and values are encountered in a variety of programs and that exposure to those messages across media genres and formats adds up and influences individuals accordingly. This perspective on media effects is in line with the idea of media in general as a source of socialization. At the onset of adolescence, the media become an important and easy means for youth to acquire the necessary scripts to function in the world in which they live (Arnett, 1995). According to social cognitive theory (Bandura, 2001), such scripts are learned from observing and making inferences about role models and their (rewarded) behavior. Content analyses show that both television content and magazines emphasize the importance of appearances in life. For instance, Kirsch and Murnen (2015) showed that teen television programs contained 2.5 references per hour to the message that personal value is derived from attractiveness. Additionally, more than half of the female characters in teen television programs consider attractiveness to be important and engage in appearance investment (Northup & Liebler, 2010). In all, there is an overrepresentation of below-average weight characters on primetime television as well as in teen television programs (Northup & Liebler, 2010). Similarly, photographs in magazines aimed at women and girls lay out a narrow vision of physical beauty (Benowitz-Fredericks et al., 2012). The male body ideal of muscularity is also exceedingly prevalent in men's magazines (Benowitz-Fredericks et al., 2012). We believe that examining the role of exposure to television and magazines is especially warranted given that television remains the dominant media consumption among youth (Rideout, Foehr, & Roberts, 2010). Magazines, on the other hand, are actively sought out by boys and girls to acquire appearance-related information (Levine,

Smolak, & Hayden, 1994). Additionally, magazines focus exclusively and profoundly on outward appearances and aim to convince their audience about the importance of an ideal appearance (e.g., Yan & Bissell, 2014). Therefore, magazine exposure differentiates from more entertainment-oriented media experiences such as television viewing in which appearance ideals are encountered rather coincidentally.

As a third contribution, the current study acknowledges that although thinness may be considered the most pervasive aspect of an unrealistic ideal appearance, other appearance features are idealized as well (Vandenbosch, 2017). Additionally, the perceptions of an ideal outward appearance seem to be more complex among early adolescents (McGladrey, 2014). Specifically, through focus groups, McGladrey (2014) showed that although young girls believe that being thin is an inextricable part of a culturally accepted ideal appearance, but also consider certain consumptive practices, such as wearing attractive and stylish clothing, as key aspects of an ideal appearance. Body image research that takes a more general approach to the importance of attractiveness rather than body weight and shape is warranted.

As such, we will examine the extent to which early adolescents believe their self-worth is contingent on their overall appearance (rather than being thin or muscular), and thus the degree to which they endorse dysfunctional appearance beliefs (Spangler & Stice, 2001). Such beliefs are considered to be stable across situations, and affect the way a person generally processes information (Spangler & Stice, 2001, p. 814). Other, related, constructs assess automatic thoughts that are triggered by specific cues or events (Carraça et al., 2011). For instance, appearance schemas represent cognitive structures that organize the processing of self-relevant appearance-related information, and are activated by certain (appearance-related) stimuli (Cash & Labarge, 1996). Hargreaves and Tiggemann (2004) showed, for instance, that appearance-related television commercials, as opposed to nonappearance-related commercials, activated appearance schemas among girls and boys. Lastly, Cash et al.

(2004) suggest that body image includes both an evaluative component (i.e., the appraisal of one's appearance) and investment component (i.e., beliefs about the importance of appearance in life and sense of self). Body image investment appears to be a better predictor of psychological well-being than body dissatisfaction (e.g., Carraça et al., 2011; Cash et al., 2004).

Prior research has provided evidence for an association between time spent reading fashion magazines, but not time spent watching television, and the endorsement of such dysfunctional appearance beliefs among female undergraduate students (Lin & Reid, 2009). In light of these and prior findings on the association between television exposure and preoccupation with appearances (e.g., Vandebosch & Eggermont, 2012), we propose the following hypotheses:

Hypothesis 1a: Total time spent watching television is positively related to dysfunctional appearance beliefs.

Hypothesis 1b: Frequency of magazine reading is positively related to dysfunctional appearance beliefs.

As a final contribution, this study aimed to increase understanding of how media exposure relates to early adolescents' dysfunctional appearance beliefs. Therefore, a multiple mediator model including the internalization of appearance ideals and other-sex expectations will be explored. Additionally, it will be examined whether early adolescents encounter appearance-focused messages through both media and peers (i.e., double dose effect) and how this double dose of appearance-focused messages affects their overvaluation of appearance. In what follows, this fourth contribution will be outlined in more detail.

Mediated Ideal Appearances and The Internalization of Appearance Ideals

The internalization of appearance ideals has been thoroughly studied and validated as a mediator in the association between media exposure and body image disturbances (e.g.,

Sands & Wardle, 2003). Internalization refers to a person's incorporation of the ideals presented in the media as personal standards (Thompson & Stice, 2001). Thompson, van den Berg, Roehrig, Guarda, and Heinberg (2004) argued that these standards become guiding principles that affect cognitions and behaviors in order to approximate the ideals (p. 294). This theoretical assumption has been confirmed by empirical studies. For instance, among adolescents, Flament et al. (2012) showed that internalizing appearance ideals related to disordered eating patterns among boys and girls. Among 10- to 13-year-old girls, Blowers, Loxton, Grady-Flessner, Occhipinti, and Dawe (2003) also showed that the negative influence of perceived pressure by the media on body satisfaction could be explained by internalization. Boys have been shown to internalize appearance ideals as well, although to a lesser extent than girls (Halliwell & Harvey, 2006).

It is expected that the internalization of appearance ideals also functions as a mediator in the relation between amount of television and magazine exposure and dysfunctional appearance beliefs. A meta-analysis by Grabe et al. (2008) has concluded a significant association between frequency of media use and internalization among women. Moreover, internalization has been shown to be significantly associated with dysfunctional appearance beliefs among female adolescents (Spangler & Stice, 2001; Spangler, 2002). The following hypotheses will therefore be tested:

Hypothesis 2a: The internalization of appearance ideals is a mediator in the association between television exposure and dysfunctional appearance beliefs.

Hypothesis 2b: The internalization of appearance ideals is a mediator in the association between magazine exposure and dysfunctional appearance beliefs.

The Internalization of Appearance Ideals and Other-Sex Appearance Expectations

Adolescence is characterized by the need to be liked and accepted by others (Blakemore & Mills, 2014). In order to know where they stand in their social group and to

understand what is approved by others, adolescents rely on various sociocultural sources (Arnett, 1995). For instance, adolescents engage in social comparisons with media models to learn about appearance norms (Schaefer & Blodgett Salafia, 2014) and to evaluate themselves and their appearance (Festinger, 1954). Once learned, individuals will comply with appearance norms because they expect it will be rewarded with acceptance by the group (Abrams, Wetherell, Cochrane, Hogg, & Turner, 1990).

At the onset of adolescence, boys and girls gradually develop a romantic identity and become more interested in learning the (appearance-related) expectations of opposite-sex peers (Connolly & McIsaac, 2011). The current study takes into account this inherent characteristic of adolescence by examining the role of appearance expectations of opposite-sex peers. To the best of our knowledge, only one study has explored the role of these opposite-sex expectations in young girls' body image. A survey study by Eggermont, Beullens, and Van den Bulck (2005) showed that 14- to 16-year-old girls who spent more time watching romantic youth dramas on television reported stronger concerns about boys' attractiveness expectations, which, in turn, decreased body satisfaction.

Such expectations might result from internalizing appearance ideals encountered in media messages. Building on the assumptions of the false consensus effect – i.e., individuals are inclined to misperceive the attitudes of others (e.g., “attractiveness is important”) as more similar to their own (Prinstein & Wang, 2005) – we argue that early adolescents who have internalized appearance ideals might be more inclined to believe that opposite-sex peers also support the norm and expect compliance with these standards. Thus, we anticipate that their overvaluation of appearance is influenced by media exposure, and that this influence will go through perceived appearance-related norms of opposite-sex peers. A multiple mediation model integrating the internalization with other-sex appearance expectations will be tested.

Hypothesis 3a: The association between television exposure and dysfunctional

appearance ideals is mediated by the internalization of appearance ideals and other-sex expectations.

Hypothesis 3b: The association between magazine exposure and dysfunctional appearance ideals is mediated by the internalization of appearance ideals and other-sex expectations.

Double Dose Effect?

Cultivation theory (Gerbner et al., 1980) postulates that individuals might be more affected by the media when their life experiences resonate with what they see in the media. Although prior studies have examined the influence of an appearance culture in which both media and peer variables are included (e.g., Jones, Vigfusdottir, & Lee, 2004), a “double dose” effect has not yet been examined in body image research. As early adolescents are only just starting to develop a romantic identity and have no dating experience (Connolly & McIsaac, 2011), involvement in mixed-sex activities serves the purpose of teaching them about sociocultural dating-norms (Gondoli, Corning, Blodgett Salafia, Bucchianeri, & Fitzsimmons, 2011). In interactions with other-sex peers, adolescents encounter the message that attractiveness is an important condition for being considered sexually appealing (Connolly, Furman & Konarski, 2000). As this message is also abundantly present in the media (e.g., Kim et al., 2007), early adolescents encounter appearance-focused messages simultaneously through the media and by interacting with peers. Therefore, we anticipate a double dose effect, meaning that exposure to media would be related to more dysfunctional appearance beliefs among those who are frequently involved in mixed-sex interactions:

Hypothesis 4a: Heterosocial involvement strengthens the influence of television exposure on dysfunctional appearance beliefs.

Hypothesis 4b: Heterosocial involvement strengthens the influence of magazine exposure on dysfunctional appearance beliefs.

In sum, this study examines the relation between media exposure and dysfunctional appearance beliefs and takes into account the importance of opposite-sex peers in early adolescents' lives. This study considers the internalization of appearance ideals and appearance-related expectations as explanatory mechanisms for this relation and explores a double dose effect.

Method

Sample and Procedure

In the fall of 2014, early adolescent boys and girls who were in the last two years of elementary school and the first year of secondary school filled out a quantitative survey. The study was approved by the ethical board of the host university. Thirty-nine schools in different regions in [country deleted] participated in the study. Subsequently, active parental consent was obtained. The children were told that the goal of the study was to investigate their everyday life and were guaranteed that the questionnaire would be processed confidentially and anonymously. A researcher was present at all time to guarantee optimal circumstances. Children completed the questionnaire in class during two class hours (each 50 minutes). No incentives were provided as is customary in [country deleted]. A total of 1039 early adolescent boys and 937 girls with a mean age of 11.77 years ($SD = 1.04$; range 10-15) participated in the study. Ninety-three percent indicated to be born in [country deleted].

Measures

Television viewing. To measure the total amount of television exposure, participants were asked to indicate how frequently they watched television on a timeline. A timeline ranging from 7.00 AM to 2.00 AM was presented for each day of the week and for weekend-days or holidays. Each hour of the day was presented by two checkboxes representing thirty minutes and participants marked the checkboxes if they typically watch television at that moment of the day. The number of marked checkboxes per timeline was summed up and

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divided by two to get an estimate of total viewing hours per day. Additionally, the total hours indicated on the time line for weekend days was multiplied by two (i.e., two weekend days). We summed the total hours per timeline and divided the sum by seven (5 weekdays and 2 weekend days) to create an estimate of total television viewing per day.

Magazine reading. Participants were asked to report how often they read each of seven types of magazines on a 5-point scale ranging from 1 (*never*) to 5 (*(almost) every day*). The magazine types were celebrity magazines, news magazines, men's magazines, women's magazines, erotic magazines, youth magazines, and sports magazines. Popular examples provided reference points for the children to make it easier to estimate their exposure to the genres. By including different types of magazines, a general measure of time spent reading magazines was obtained, which coincides with the measure of television exposure (in which specific content was not taken into account either). In order to obtain an estimate of time spent reading magazines, all seven items were summed up (i.e., we made no differentiation between the genres) and divided by seven.

The internalization of appearance ideals. Internalization was assessed with five items of the internalization subscale of the SATAQ-3 (Thompson et al., 2004). The original scale consists of nine items. However, due to the length of the questionnaire, we decided to only use items with a factor loading of $> .40$. Additionally, reverse-coded items were not included as is recommended by Sánchez-Carracedo et al. (2015). Example items are "I compare my body to the bodies of TV and movie stars" and "I would like my body to look like the models who appear in magazines." Agreement with these statements was measured using a 5-point scale ranging from "*I totally disagree*" (=1) to "*I totally agree*" (=5). The scale showed good internal consistency ($\alpha = .88$).

Other-sex expectations. To measure other-sex expectations about appearances, a scale was developed. For girls, we measured the extent to which they believe that boys expect

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girls to be thin, fit, sexy, and pretty (i.e., “Boys expect girls to be sexy.”). For boys, we measured the extent to which they believe that girls expect boys to be muscled, athletic, sexy, and handsome (i.e., “Girls expect boys to be muscled.”). The items were based on the aspects of an ideal appearance as documented by prior research (e.g., Willis & Knobloch-Westerwick, 2014). Respondents rated their agreement with the statements on a 5-point scale ranging from “*I totally disagree*” (= 1) to “*I totally agree*” (= 5). The scale showed good internal consistency (boys: $\alpha = .84$; girls: $\alpha = .75$).

Dysfunctional appearance beliefs. The Beliefs About Appearance Scale (Spangler & Stice, 2001) measures the perceived impact of the respondent’s appearance on his or her life. The original scale has been tested and validated among adolescent samples (e.g., Spangler, 2002). However, during data collection, respondents showed poor understanding of some items (i.e., they asked questions regarding the meaning of the items; an issue that may have resulted from the translation of the English items to Dutch). Therefore, and based on factor loadings (i.e., items with a factor loading of $<.40$ were retained), we selected eight of the original 20 items (information can be obtained from the corresponding author). Items such as “People would be more interested in me if I looked better” and “My value as a person depends upon how I look” are answered on a 5-point scale ranging from “*I totally disagree*” (=1) to “*I totally agree*” (=5). This measure showed good internal consistency ($\alpha = .87$).

Heterosocial involvement. The Heterosocial Involvement Scale developed by Gondoli, Corning, Blodgett Salafia, Bucchianaeri, and Fitzsimmons (2011) was used to measure respondents’ mixed-sex peer group activities. The scale consists of six items, such as “How often do you spend free time after school with a group of boys and girls?” and “How often do you go to parties, dances, or other social events where there are both boys and girls present?” Respondents indicated their involvement in events with peers of both genders on a 7-point scale ranging from *Never* (=1) to *Every day* (=7). Cronbach’s alpha was .86.

Control variables. We calculated participants' BMI by dividing their self-reported weight by their squared length. In addition, participants reported their age.

Results

Table 1 displays the descriptive statistics for the variables included in this study. Independent t-tests were calculated to examine possible gender differences in the variables of interest. On average, girls watched just over three hours of television per day, whereas boys watched more than three and a half hours. This difference was statistically significant ($t(1862.33) = 4.80, p < .05, \text{Cohen's } d = .22$). In addition, boys reported significantly higher values of other-sex expectations than girls, $t(1897.56) = 4.86, p < .05, \text{Cohen's } d = .22$. Girls, however, read magazines more often than boys, $t(1701) = -3.37, p < .05, \text{Cohen's } d = .16$. Boys and girls did not differ on dysfunctional appearance beliefs nor internalization.

Zero-order correlations were calculated to examine the associations between the media and body related variables (Table 1). Hypotheses 1a and 1b postulated that media exposure would positively relate to dysfunctional appearance beliefs. Based on the correlations, hypothesis 1 was supported for television exposure and magazine reading.

[TABLE 1 ABOUT HERE]

To detect potential differences between schools, we examined the intraclass correlation coefficient (ICC) for dysfunctional appearance beliefs, $z = 1.88, p = .06, \rho = .02$; internalization, $z = 2.36, p = .02, \rho = .03$; and other-sex expectations, $z = 2.27, p = .02, \rho = .03$. The ICC is the proportion of variance in the outcome because of within-unit differences at higher levels, that is, the schools. As this showed that the ICC was close to zero (i.e., approximately 6% of the variance of dysfunctional appearance beliefs, 3% of the variance of internalization, and 3% of the variance of other-sex expectations could be ascribed to the variance across schools), multilevel models were not further developed (Heck, Thomas, & Tabata, 2013).

Testing the Hypothesized Model

The hypothesized associations were tested using structural equation modeling (AMOS). All models controlled for respondents' BMI and age. Considering the large sample, we used bootstrapping (1000 samples, ML Bootstrap, 95% CI) to assess the significance of the examined associations. Imputation was performed, since the bootstrapping method does not allow missing values. Six hundred and fifty-five respondents had missing data. Three hundred and fifteen respondents had only one missing value that had to be imputed. Most variables had less than 5% missing data. Television exposure and magazine consumption were treated as observed variables, internalization, other-sex expectations, and dysfunctional appearance beliefs were treated as latent variables in the SEM models (figures 1 and 2). The hypothesized models are tested separately for boys and girls. A first model was tested with only the internalization of appearance ideals as a mediator between the media variables and dysfunctional appearance beliefs. In a second model (figures 1 and 2), other-sex expectations was added as a second mediator.

Hypothesized associations Among Girls

The second hypothesis postulated that internalization mediates the relation between television and magazine exposure and dysfunctional appearance beliefs. The fit indices indicated a good fit of the model; $\chi^2(105) = 366.76, p < .001, CFI = .96, RMSEA = .05, AGFI = .93, \chi^2/df = 3.649$. Both television and magazine exposure were significantly related to internalization ($\beta = .08, SE = .032, 95\%CI[.015, .142], p < .05$ and $\beta = .29, SE = .032, 95\%CI[.221, .347], p < .01$, respectively) which was, in turn, significantly related to dysfunctional appearance beliefs ($\beta = .50, SE = .030, 95\%CI[.440, .556], p < .01$). In this model, which included internalization as a mediator between television/magazine exposure and dysfunctional appearance beliefs, the direct relation between television exposure and dysfunctional appearance beliefs remained significant ($\beta = .11, SE = .031, 95\%CI[.053,$

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.177], $p < .01$). The direct relation between magazine exposure and dysfunctional appearance beliefs became insignificant ($\beta = .03$, $SE = .032$, $95\%CI[-.025, .100]$, $p = .29$). The standardized indirect effect of television exposure on early adolescent girls' endorsement of dysfunctional appearance beliefs through internalization was significant, $\beta = .04$, $SE = .02$, $95\%CI = [.01, .07]$, $p = .01$. Hypothesis 2a was thus supported among the girls. The standardized indirect effect of magazine exposure on early adolescent girls' endorsement of dysfunctional appearance beliefs through internalization was significant ($\beta = .14$, $SE = .02$, $95\%CI = [.11, .18]$, $p < .01$), which supports hypothesis 2b.

[FIGURE 1 ABOUT HERE]

The third hypothesis added other-sex expectations as a second mediator. The hypothesized associations for girls are summarized in Figure 1. The model showed a good fit of the data ($\chi^2(169) = 560.73$, $p < .001$, $CFI = .95$, $RMSEA = .05$, $AGFI = .93$, $\chi^2/df = 3.32$). The results indicated that both television and magazine exposure were significantly related to internalization ($\beta = .08$, $SE = .032$, $95\%CI[.014, .144]$, $p < .05$ and $\beta = .29$, $SE = .031$, $95\%CI[.222, .345]$, $p < .01$, respectively) which was, in turn, significantly related to other-sex expectations ($\beta = .21$, $SE = .041$, $95\%CI[.119, .287]$, $p < .01$). Other-sex expectations were significantly associated with early adolescent girls' endorsement of dysfunctional appearance beliefs ($\beta = .22$, $SE = .037$, $95\%CI[.147, .287]$, $p < .01$). The direct relation between television exposure and dysfunctional appearance beliefs remained significant ($\beta = .10$, $SE = .031$, $95\%CI[.049, .167]$, $p < .01$), whereas magazine exposure and dysfunctional appearance beliefs were no longer directly related ($\beta = .02$, $SE = .031$, $95\%CI[-.042, .079]$, $p = .58$). The indirect effect was significant (for television exposure: $\beta = .03$, $SE = .02$, $95\%CI = [.02, .09]$, $p < .01$; for magazine exposure: $\beta = .25$, $SE = .02$, $95\%CI = [.12, .20]$, $p < .01$). The explained variance in dysfunctional appearance beliefs rose from 32% to 36.7% after adding other-sex expectations

to the hypothesized model. As such, hypotheses 3a and 3b were supported among the girls.

Hypothesized associations Among Boys

Among the boys, the model involving television and magazine exposure, internalization, and dysfunctional appearance beliefs showed a good fit of the data with $\chi^2(106) = 382.38, p < .001, CFI = .95, RMSEA = .05, AGFI = .94, \chi^2/df = 3.61$. The results showed that magazine exposure was significantly related to internalization ($\beta = .29, SE = .031, 95\%CI[.22, .34], p < .01$) but was not directly related to dysfunctional appearance beliefs ($\beta = .03, SE = .031, 95\%CI[-.03, .09], p = .31$). Television exposure was significantly related to dysfunctional appearance beliefs ($\beta = .06, SE = .031, 95\%CI[.002, .127], p < .05$) but not to internalization ($\beta = .00, SE = .031, 95\%CI[-.065, .057], p = .97$). Internalization was significantly related to dysfunctional appearance beliefs ($\beta = .47, SE = .31, 95\%CI[.395, .520], p < .01$). Hypothesis 2a was thus not supported among the boys. The standardized indirect effect of magazine reading on early adolescent boys' endorsement of dysfunctional appearance beliefs through internalization was significant, $\beta = .13, SE = .02, 95\%CI = [.10, .17], p < .01$. As such, hypothesis 2b was supported.

[FIGURE 2 ABOUT HERE]

The third hypothesis added other-sex expectations as a second mediator. The hypothesized associations for boys are summarized in Figure 2. The model showed a good fit ($\chi^2(169) = 525.84, p < .001, CFI = .95, RMSEA = .05, AGFI = .93, \chi^2/df = 3.11$). Magazine exposure was significantly related to internalization ($\beta = .29, SE = .032, 95\%CI[.227, .344], p < .01$), television exposure was not ($\beta = .02, SE = .033, 95\%CI[-.041, .088], p = .53$). Internalization was significantly related to other-sex expectations ($\beta = .17, SE = .038, 95\%CI[.092, .244], p < .01$). In turn, other-sex expectations were significantly associated with early adolescent boys' endorsement of dysfunctional appearance beliefs ($\beta = .19, SE = .034, 95\%CI[.130, .258], p < .01$). The direct relation between television and magazine

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exposure and dysfunctional appearance beliefs was no longer significant ($\beta = .04$, $SE = .031$, 95% CI[-.015, .106], $p = .17$ and $\beta = -.00$, $SE = .031$, 95% CI[-.061, .057], $p = .95$, respectively). For television exposure, the indirect effect through internalization and other-sex expectations was not significant ($\beta = .01$, $SE = .02$, 95% CI = [-.02, .04], $p = .64$). Thus, hypothesis 3a was not supported among the boys. For magazine exposure, the indirect effect through the internalization and other-sex expectations did reach significance ($\beta = .14$, $SE = .02$, 95% CI = [.11, .18], $p < .01$). As such, hypothesis 3b could be supported.

Moderation by gender. In order to examine whether boys and girls significantly differed on the examined relations, a multiple group analysis was performed. First, metric invariance across gender was confirmed; ΔCFI value was less than the recommended .01 cutoff point (CFI for unconstrained model = .915; CFI for constrained model = .914) (Cheung & Rensvold, 2002). Second, boys and girls were compared on the individual hypothesized paths. Using the CFI difference test, results showed that boys and girls did not differ on the structural weights in the model ($\Delta CFI = .001$; CFI for unconstrained model = .952; CFI for constrained model = .951). As such, there was no moderation by gender.

Double dose effect

The last hypothesis of this study claimed that early adolescents might encounter the same messages in their interactions with peers as they do in the media and, as such, get a “double dose” of appearance-focused messages. To test this hypothesis, a multiplicative term consisting of the media variables (i.e., television and magazine exposure, separately) and heterosocial involvement was created. For both boys and girls, the moderator terms were not significantly related to internalization (girls: $\beta = .02$, $SE = .03$, $p = .61$ for magazines and $\beta = .05$, $SE = .01$, $p = .14$ for television; boys: $\beta = .01$, $SE = .03$, $p = .75$ for magazines and $\beta = .06$, $SE = .008$, $p = .05$ for television), other-sex expectations (girls: $\beta = .03$, $SE = .02$, $p = .41$ for magazines and $\beta = -.004$, $SE = .007$, $p = .92$ for television; boys: $\beta = -.009$, $SE = .03$, $p =$

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.79 for magazines and $\beta = .03$, $SE = .008$, $p = .40$ for television), nor dysfunctional appearance beliefs (girls: $\beta = .03$, $SE = .04$, $p = .35$ for magazines and $\beta = -.008$, $SE = .01$, $p = .78$ for television; boys: $\beta = .01$, $SE = .03$, $p = .69$ for magazines and $\beta = .04$, $SE = .009$, $p = .16$ for television). As such, there was no support for a double dose effect.

Discussion

Dysfunctional appearance beliefs have been related to dissatisfaction with specific body areas and eating disorder symptomatology (Spangler & Stice, 2001; Spangler, 2002). Documenting the endorsement of such beliefs among early adolescents is thus warranted. The current study explored whether (a) amount of television and magazine exposure was related to dysfunctional appearance beliefs, (b) the internalization of appearance ideals and other-sex expectations could explain this association, and (c) heterosocial involvement strengthened the influence of media exposure on early adolescents' overvaluation of appearances. The findings of the current study contribute to this strand of literature in various ways.

Media Exposure and Dysfunctional Appearance Beliefs

Prior studies have often measured body image disturbances, such as body dissatisfaction, as a perceived discrepancy between the actual and ideal body shape, without differentiating between boys and girls (Lawrie, Sullivan, Davies, & Hill, 2007). These studies have often concluded that body dissatisfaction is more prevalent among girls. This finding could, however, be explained by the fact that boys' body dissatisfaction is more complex as it can result from a wish to be bigger (i.e., to be more muscular) as well as a wish to be smaller (i.e., to lose fat) (Lawrie et al., 2007). The present study therefore measured the endorsement of dysfunctional appearance beliefs as it is more likely to be interpreted similarly by boys and girls and because it reflects more generally the importance that is attached to attractiveness. Our results do indicate that boys and girls did not differ in the extent to which they endorsed dysfunctional appearance. Thus, when asked more generally about the role of appearance in

their life, boys appear to value appearance as highly as girls and are thus equally at risk of investing in their appearance. Future studies should, however, consider that although early adolescent boys and girls endorse similar levels of dysfunctional appearance beliefs, the consequences of endorsing these beliefs could be different and should be studied further. For instance, girls' appearance beliefs could have an impact on the development of eating disorders, whereas boys' body image concerns may be more likely to be a risk factor for unhealthy muscle-enhancing behaviors (Benowitz-Fredericks et al., 2012).

It should be noted, however, that early adolescents in our study generally did not believe that the way they look is an important aspect of their self-worth. This finding is in keeping with prior studies on dysfunctional appearance beliefs among adolescents (e.g., Spangler, 2002). Although studies have related body dissatisfaction with diminished levels of global self-worth (e.g., Phares, Steinberg, & Thompson, 2004), the current findings suggest that, when asked directly, early adolescents do not overestimate the importance of appearance in self-evaluations.

Although prior research on the influence of overall television and/or magazine exposure on body image disturbances has been inconclusive (e.g., Harrison & Hefner, 2006; Kirsh, 2010), our findings show that amount of television and magazine exposure increased early adolescents' endorsement of dysfunctional appearance beliefs. Following cultivation theory (Gerbner et al., 1980), we expected that general measures of media consumption could predict the endorsement of such ideals when similar messages (e.g., the message that appearance is important; Benowitz-Fredericks et al., 2012; Northup & Liebler, 2010) are presented across different media types and genres. In line with cultivation theory, our findings confirm the pervasiveness of appearance ideals in contemporary media as even the sheer amount of media exposure can teach youth that attractiveness is important. Important to note, the current findings are in line with meta-analyses (e.g., Grabe et al., 2008) suggesting

that there is a link between media and body image, although the effects appear to be small.

The Mediating Role of Appearance Ideals and Norms

In order to gain more insight in the influence of media exposure on the endorsement of dysfunctional appearance beliefs, a multiple mediation model with the internalization of appearance ideals and other-sex expectations was tested. Prior research has validated the internalization of appearance ideals as an important mediator between media exposure and body image disturbances among adolescents (e.g., Jones et al., 2004). These studies, however, focused on the influence of perceived pressure from the media or exposure to appearance-focused media (e.g., Blowers et al., 2003; Clark & Tiggemann, 2006), whereas the internalization of appearance ideals has not yet been examined as a mediator in the association between amount of media exposure and endorsement of dysfunctional appearance beliefs. Our findings confirm that the more early adolescent girls watched television and read magazines, the more they internalized appearance ideals which, in turn, predicted their belief that attractiveness defines their self-worth. Among boys, only time spent reading magazines was related to their internalization of appearance ideals. A possible explanation for this insignificant finding might be the lesser prevalence of male as opposed to female appearance ideals in television content. Boys and girls also have different preferences regarding television content. For instance, action programs are more popular among boys, whereas girls prefer soap series (Roe, 2000). Appearance ideals are possibly less prevalent in the television content preferred by boys. In addition, research indicates that physical attractiveness is more important for women and their social success than it is for men (e.g., Knauss et al., 2007).

The Role of Opposite-Sex Peers

Another objective of the study was to take into account early adolescents' increasing interest in opposite-sex peers (Arnett, 2013). As such, the extent to which early adolescents believe that peers of the opposite sex have appearance-related expectations was added as a

mediator to the hypothesized model. These findings indicated, first, that boys reported to believe more strongly that girls endorsed certain appearance expectations for boys. Boys might come to believe that girls highly value physical appearance in various aspects of life, including possible love interests. Television shows aimed at youngsters were hypothesized to play an important role therein as they have been shown to portray attractiveness as a more important issue for women than men (Gerding & Signorielli, 2014). In line with the expectations, total amount of television and magazine exposure was not directly related to boys' and girls' other-sex expectations, but indirectly through the internalization of appearance ideals. Specifically, in accordance with the false consensus effect, our results show that once early adolescent boys and girls have incorporated the idea that appearances are important into their own belief system (i.e., internalize), they are more inclined to misperceive the attitudes of others as similar to their own (Prinstein & Wang, 2005), and believe opposite-sex peers value the same appearance standards. In turn, results showed that opposite-sex expectations predicted more endorsement of dysfunctional appearance beliefs.

In all, the current study answered the call to consider the role of opposite-sex peers in shaping adolescents' body evaluations (Zimmer-Gembeck, 1999) and confirmed the importance of considering peers in the media-body image association. By incorporating appearance-expectations of opposite-sex peers, we believe our findings provide an interesting perspective on the overvaluation of appearances. Specifically, the extent to which early adolescents believe that opposite-sex peers hold them to narrowly defined appearance standards might be argued to accord with the extent to which they self-objectify (indirectly through others). Self-objectification refers to a view of oneself as an object with an exclusive focus on those attributes necessary for attaining the ideal body while disregarding other aspects of the self (Noll & Fredrickson, 1998). Prior studies have indicated that adolescents are already at risk of developing an objectified self-image (e.g., Vandenberg & Eggermont,

2012). Future studies might want to delve more deeply into the idea of indirect self-objectification by examining to what extent individuals believe that others' expectations focus exclusively on their outward appearance and body.

Although prior studies have shown that mixed-sex interactions affect early adolescent girls' perceived pressure to be thin and body dissatisfaction (Gondoli, et al., 2011), involvement in mixed-sex activities did not strengthen the influence of media exposure on body image. The construct of heterosocial involvement might have been too broad to be able to find a double dose effect in the current study. In particular, studies examining the double dose effect have used real life experiences that resonate with the media measure. For instance, Fikkers et al. (2013) examined the influence of observing aggression both in media and at home (i.e., family conflict) on adolescents' aggression. Despite the insignificant findings of the current study, future studies should continue to explore a double dose effect in body image research and might benefit from including peer-measures that resonate more with the messages encountered in the media, such as appearance conversations among friends.

Limitations and Recommendations

The findings of the current study are subject to a number of limitations that warrant attention. First, our study was limited by its cross-sectional design which obstructs us from making any conclusions about the causal order of the examined associations. Some of the associations could, however, also go in the other direction; Prior studies have, for instance, assumed that someone's assessment of how they think others rate their appearance is dependent on their own body image (Dijkstra & Barelds, 2011). Experimental and longitudinal research is necessary to fine-tune scholarly knowledge on these processes, such as temporal precedence of media exposure.

A second limitation refers to the measurement of other-sex expectations about appearance. This measure was used to capture the influence of other-sex peers on body image

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development among early adolescents who are starting to develop a romantic identity. The results show that such other-sex expectations play a significant role in early adolescents' dysfunctional appearance beliefs. However, future studies should also investigate the appearance-related expectations of actual love interests and take into account the role of romantic involvement or experience. In addition, although the heterosexual script is abundantly present in contemporary media (e.g., Kirsch & Murnen, 2015) and the objective of the current study was to examine media's influence on early adolescents' body image, it should be acknowledged that not all young people develop heterosexual interests. Future studies could therefore also consider same-sex peers as targets of romantic interest.

Furthermore, future studies could benefit from including pubertal status as a control variable.

A third limitation refers to our choice to focus on television and magazines. Although both traditional media formats have been shown to feature idealized images of both men and women (e.g., Wykes & Gunter, 2005), newer types of media content, such as video games and online advertisements, have been found to emphasize appearance ideals as well (Martins, Williams, Ratan, & Harrison, 2011; Slater, Tiggemann, Hawkins, & Werchon, 2012).

Additionally, users of social network sites are encouraged to value appearances by sharing (sexualized) photographs and commenting on those of others (e.g., Sarabia & Estévez, 2016). Previous research has shown that internet use, and social networking sites in particular, was predictive of body image concerns among adolescents (Meier & Gray, 2014; Tiggemann & Slater, 2014). Future studies may want to incorporate early adolescents' total media diet and compare different media types in their relation with body image concerns. Moreover, we used different measures for television and magazine exposure. Specifically, respondents were presented timelines to indicate how often they watched television while magazine exposure was measured by having respondents indicate how frequently they read different genres. We recommend future studies to use the same measurement in order to preclude this condition

from affecting the results.

Lastly, we focused on media volume as it was argued that appearance ideals are abundantly present in early adolescents' media diets. Nevertheless, studies examining whether specific media content can predict why early adolescents come to believe that opposite-sex peers will hold them to the same appearance standards regularly encountered in the media would further increase scholarly understanding of how this influence takes place. Additionally, total amount of television exposure was measured by means of timelines. We used separate time lines for all weekdays, but only one timeline represented weekend days and holidays. Using separate timelines for Saturdays, Sundays, and holidays could increase the accuracy of measuring total amount of television exposure in a typical week.

Conclusion

Although research has increased our understanding about the influence of exposure to appearance-focused media on early adolescents' body image (e.g., Anschutz et al., 2011; Benowitz-Fredericks et al., 2012), the current study added that amount of television and magazine exposure directly and indirectly, through internalization, influences the extent to which youth ascribes their personal worth to their appearance. Furthermore, this study highlights the importance of taking into account other-sex appearance expectations in understanding the influence of total amount of media exposure on early adolescents' endorsement of dysfunctional appearance beliefs. Although heterosocial involvement did not strengthen the influence of media exposure on early adolescents' body image, we recommend future studies to continue to explore whether early adolescents encounter appearance-related messages through both the media and their peers and how this affects their body image.

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