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Adolescents' Objectification of their Same-Sex Friends: Indirect Relationships with Media Use through Self-Objectification, Rewarded Appearance Ideals, and Online Appearance Conversations

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Abstract

The current cross-sectional study among adolescent boys and girls ($N = 640$, $M_{\text{age}} = 15.47$, $SD = 1.63$) examined whether exposure to popular television programs and Facebook predicts the extent to which adolescents objectify their same-sex friends. Two pathways were tested to explain these relationships. The first included internalization of rewarded appearance ideals and self-objectification. The second included appearance conversations with friends on Facebook. Results revealed that adolescents' television exposure and Facebook use only indirectly predicted friend-objectification through their engagement in appearance conversations on Facebook. The relationship between television exposure and friend-objectification was also fully mediated by internalization and self-objectification.

Adolescents' Objectification of their Same-Sex Friends: Indirect Relationships with Media Use through Self-Objectification, Rewarded Appearance Ideals, and Online Appearance Conversations

Adolescents are exposed to sexualizing media messages on a daily basis (Ward, 2016). In such messages, individuals are portrayed as sexual objects or evaluated as attractive because of their compliance with narrow appearance ideals (APA, 2007). Adolescents may encounter these messages in traditional media, such as popular television programs, as well as in social media such as Facebook. Objectification literature explains that exposure to sexualizing messages may lead to self-objectification, i.e., an instrumental look at one's body in which physical appearance becomes more important as compared to personality and feelings (Fredrickson & Roberts, 1997; Ward, 2016). Although scholars have suggested that exposure to sexualizing messages may also lead individuals to turn the objectifying look towards others (Fredrickson & Roberts, 1997; Ward, 2016), not much work has been done on this. We aim to contribute to the media-objectification literature by examining (1) popular television exposure and Facebook use and (2) whether adolescents objectify their (same-sex) friends more strongly when consuming these media. In line with literature indicating that an objectifying view may have a damaging influence on the quality of interpersonal relationships (Vaes, Paladino, & Puvia, 2011; Zurbriggen et al., 2011), adolescents may learn to award more importance to their friends' physical appearance and less importance to more vital attributes of friendships, such as trust and intimacy (APA, 2007; Fredrickson & Roberts, 1997; Zurbriggen, Ramsey, & Jaworski, 2011). Nonetheless, building healthy and high-quality friendships is a crucial factor in adolescent development (Arnett, 2013), as it has been shown to protect youth from social isolation and poor psychological well-being (Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer, 2007). Considering that an

overemphasis on appearance may hamper the development of healthy friendships, the aim of the current study is to take a first step in examining the role of mass and social media in adolescents' tendency to objectify their same-sex friends.

In the current study, direct relations between popular television and the social network site (SNS) Facebook (independent variables) and friend-objectification (dependent variable) will be examined. Moreover, two pathways underlying this association will be studied. First, a pathway involving the internalization of appearance ideals (mediating variable) and self-objectification (mediating variable) is added to the model. Notably, we address internalization from a reward perspective as scholars have revealed that appearance ideals are internalized because media users come to believe that compliance with these ideals will be rewarded (Trekels & Eggermont, 2017). Second, appearance conversations on Facebook (mediating variable) will be examined as an additional mechanism to explain how sexualizing media may relate to friend-objectification as research has suggested that talking about appearance is related to adolescents' perception of how important an attractive appearance is to their friends (Webb, Zimmer-Gembeck, & Donovan, 2014). Figure 1 represents the hypothesized psychological process.

Sexualizing Content on Television and Social Media

Kim et al. (2007) showed that popular sitcoms generally follow a stereotyped heterosexual script. One aspect of this script entails that sex is the most defining component of men's masculinity, which includes references to men as sex initiators and men as preoccupied with sex. A final crucial aspect of the script is men's obsession with women's bodies and the sexualization of women (i.e., women's value is solely derived from their physical appearance). Several studies have shown that such sexualization is often portrayed in adolescents' media diets, including popular television genres such as reality programs and music videos (Ferris, Smith, Greenberg,

& Smith, 2007; Ward, 2016). McDade-Montez, Wallander, and Cameron's (2017) analysis of ten popular teen television programs showed that each episode contained at least three instance of sexualization. Additionally, Sink and Mastro's (2017) content-analytical work further confirmed the hypersexualization of women on prime time television. Although the literature has generally focused on the sexualization of women, research on magazine advertisements has shown that sexualizing media images of men have become increasingly prevalent (Farquhar & Wasylkiw, 2007). A large number of studies have related media exposure to body image disturbances, including self-objectification (see review by Dakanalis & Riva, 2013 and Ward, 2016). The current study builds on this prior content-analytical work and the premise of cultivation theory (Gerbner, Gross, Morgan, & Signorielli, 1980) that the overall narrative of sexualization may be found across different types of media genres and formats. Therefore, the current study will focus on adolescents' overall television use as a potential precursor of holding an objectifying view on the self and others.

Adolescents also encounter sexualizing content on newer media. Given the visual features (e.g., sharing pictures), SNSs such as Facebook place a strong focus on appearance and self-presentation (Perloff, 2014). One way in which sexualization occurs on Facebook is through suggestive selfies (Ruckel & Hill, 2017), characterized by a sexy gaze, sexy or semi-naked clothing, sexy posture, and a sexy appearance (e.g., van Oosten, Vandenbosch, & Peter, 2017). In all, such pictures often portray sexualization by emphasizing or isolating the specific parts of one's body that comply with society's narrow appearance ideals, while concealing the face (APA, 2007; Hall et al., 2012). Consequently, these portrayals resonate with the conceptualization of sexualization whereby a person's value is based solely on physical appearance and bodies are made into objects for others' sexual use (APA, 2007; Hall et al.,

2012). Studies documenting online sexualized presentation find both explicit cues (i.e., erotic or sexualized pictures on Facebook; Sarabia & Estévez, 2016) as well as more subtle cues (i.e., gender stereotypical cues in women's Instagram selfies; Butkowski, Dixon, Weeks, & Smith, 2020) in which sexualizing characteristics can be present. Although it should be noted that overall rates of sexualization remain relatively low (e.g., Ruckel & Hill, 2017), research generally shows that it is this type of pictures that garners the most positive feedback among users (e.g., Butkowski et al., 2020; Ramsey & Horan, 2018). As argued by Ramsey and Horan (2018), this positive feedback loop fits in with the objectifying culture in which self-worth is contingent on outward looks. Being exposed to – positively received – sexualizing pictures might then affect users' body image. A recent review of the literature by Fardouly and Vartanian (2016) indicated that social media use, particularly Facebook, consistently related to negative body image, including self-objectification. Given these findings and the popularity of Facebook among adolescents in Belgium at the time of data collection, the current study examines overall Facebook use as a factor contributing to objectification of self and others.

Self-Objectification and the Objectification of Others

Objectification theory (Fredrickson & Roberts, 1997) explains how encounters with sexualizing images and messages on television and Facebook can increase a tendency to self-objectify (e.g., Aubrey, 2006; Vandebosch & Eggermont, 2016). A recent meta-analysis by Karsay, Knoll, and Matthes (2018) confirmed a moderate, significant effect of media exposure on self-objectification ($r = .19$) that was conditional of media type. More specifically, stronger effects were found for online media when compared to television. This result might not come as a surprise considering to the highly interactive, interpersonal, and visual characteristics of social media (Perloff, 2014). Daniels, Zurbriggen, and Ward's (2020) review also indicates the

important role of both mass and social media in girls' self-objectification. Presumably due to the high prevalence of sexualizing imagery in popular media (Hall et al., 2012; Ward, 2016), several studies have found associations between adolescents' overall exposure to television or social media (regardless of content) and body image-related outcomes including self-objectification (Eyal & Te'eni-Harari, 2013; Slater & Tiggemann, 2015; Trekels, Vangeel, & Eggermont, 2017; Trekels, Ward, & Eggermont, 2018).

According to Fredrickson and Roberts (1997), sexualizing experiences (such as media use) may not only lead to self-objectification but also to a tendency to objectify others. This influence on other-objectification can further be explained by social cognitive theory, which predicts that observing role models encourages observers to adopt these models' practices in cognitive scripts that guide their own attitudes and behaviors (Bandura, 2002). Television content particularly portrays characters who sexually objectify someone else rather than themselves. Most prominently, men are shown treating women as sexual objects (Kim et al., 2007), but also portrayals of television characters commenting on the bodies of their same-sex peers are not uncommon (Himes & Thompson, 2007). On social media adolescents can encounter sexual objectification through comments in which peers praise others for their appearance (Sarabia & Estévez, 2016). By observing how attractive role models (i.e., TV) or peers (i.e., Facebook) objectify others, adolescents may thus acquire an objectification-script. Although media examples, particularly television, tend to portray objectification in a heterosexual context (Kim et al., 2007), this script might be generalized and also teach adolescents to judge their same-sex friends based on their physical appearance.

Prior empirical research confirming this suggestion is scarce. Research did show that media use relates to views of women as sex objects (e.g., Peter & Valkenburg, 2007). In one

longitudinal study (Ward, Vandebosch & Eggermont, 2016), boys' sexualizing media use, for instance, predicted their objectification of women. Less is known about the objectification of more significant others. Only one study showed that media use increased young adults' tendency to objectify their romantic partner (Zurbriggen et al., 2011). The relationship between media use and friend-objectification has not yet been studied.

Objectification of Others and Adolescent Friendships

From a developmental perspective, it may be particularly important to study the relationship between television and social media use and friend-objectification. Adolescents spend more time with their same-sex friends, rendering them an important source of companionship and intimacy (Arnett, 2013). Appearance and attractiveness are important for peer acceptance among adolescents and teasing and bullying often rely on appearance references (Vannatta, Gartstein, Zeller, & Noll, 2009). This appearance focus in adolescent peer groups may result in a breeding ground for objectification toward one another.

Objectification can be seen as a power relation in which the objectifying person denies the objectified fully fledged human emotions and cognitive and moral capacities (Noll & Fredrickson, 1998). Several studies have shown that individuals who were shown objectified portrayals of others or who were prompted to objectify others judged these others as more superficial, less warm, less capable of emotions, less professionally competent, less deserving of moral treatment, and more different from themselves (Heflick, Goldenberg, Cooper, & Puvia, 2011; Vaes et al., 2011). Although these judgements have mostly been found for objectified women, reactions toward objectified men seem to be similar and both objectifying men and women report similar judgements (Vaes et al., 2011). These results show that objectification can negatively affect personality judgements that are important to friendships, such as morality and

warmth. Moreover, the research by Zurbriggen and colleagues (2011) found that men and women who objectified their romantic partner more strongly were also less satisfied with their relationship.

Like romantic relationships among adults, close relationships with same-sex friends are an important developmental goal during adolescence and are vital to adolescents' psychological well-being (Arnett, 2013; Hall-Lande et al., 2007). Their tendency to objectify friends may damage these important ties given the dehumanizing judgements that can follow from objectification (Vaes et al., 2011). Adolescents who objectify their friends perceive aspects that are vital to friend relationships such as intimacy and trust as less important than their physical appearance. An undervaluation of these qualities may weaken adolescents' feeling of connectedness to friends and potentially negatively impact their well-being (Hall-Lande et al., 2007). In line with the previous arguments about the potential implications of media use for objectification, the first aim of this study is to investigate whether the extent to which adolescents objectify their same-sex friends can be predicted by their use of mass and social media:

H1: Exposure to popular television and Facebook use are positively related to friend-objectification.

The association between media and friend-objectification may develop not only directly but also indirectly. Two pathways are proposed that may mediate this relationship.

Pathway 1: Internalization and Self-Objectification

A first pathway suggested in the literature involves internalization and self-objectification. The internalization of appearance ideals is the degree to which individuals accept mediated appearance ideals as personal goals and work towards achieving these goals

(Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004). Recent literature (Trekels & Eggermont, 2017) building on social cognitive theory (Bandura, 2002) has pointed out that the internalization of appearance ideals should be interpreted from a reward perspective as media often link sexualization to social rewards. For instance, in popular TV programs, compliance with appearance ideals is reinforced by positive comments, whereas deviance is punished with negative remarks (Kim et al., 2007). Social cognitive theory suggests that perceived rewards play an important role in the tendency to learn by observing attractive models (Bandura, 2002). Prior research has found that individuals' internalization of the media's appearance ideals could indeed be predicted by the extent to which they believed that meeting these ideals would be associated with benefits such as self-confidence and popularity (Trekels & Eggermont, 2017). As such, we focus on rewarded appearance ideals.

Research has shown that sexualizing media use can predict the development of self-objectification directly, but also indirectly through internalization (Vandenbosch & Eggermont, 2012; Karsay & Matthes, 2016). Regarding the direct relation, objectification theory (Fredrickson & Roberts, 1997) explains that sexualizing experiences lead individuals to turn this sexualizing view towards themselves. Regarding the indirect relation, exposure to sexualizing media can lead individuals to internalize the media's appearance ideals. Next, the internalized appearance ideals support users to treat their bodies as objects that should meet these ideals (Vandenbosch & Eggermont, 2012). Longitudinal studies have found support for the indirect relationship between exposure to television or SNSs and self-objectification through the internalization of appearance ideals (Vandenbosch & Eggermont, 2012, 2014).

Several studies have found that people who objectify themselves more also objectify others more (Davidson, Gervais, & Sherd, 2015; Lindner, Tantleff-Dunn, & Jentsch, 2012;

Strelan & Hargreaves, 2005; Zurbriggen et al., 2011). Although the relationship between self-objectification and other-objectification may develop in both directions (Strelan & Hargreaves, 2005), a pathway is proposed in which self-objectification precedes other-objectification (Davidson et al., 2015). According to objectification theory, exposure to sexualizing messages will lead to an internalization of this sexualizing view, which will then be applied to one's own body (Fredrickson & Roberts, 1997; Moradi & Huang, 2008). Social comparison theory (Festinger, 1954) can explain why other-objectification could be a subsequent step in this process (Davidson et al., 2015; Lindner, Tantleff-Dunn, & Jentsch, 2012). Individuals tend to compare themselves to similar others in order to evaluate themselves (Festinger, 1954). If someone believes that their physical appearance is a key aspect of who they are (because of self-objectification), they may be especially motivated to compare their appearance to that of those around them. Thus, adolescents who self-objectify may pay overly strong attention to the appearance of their peers and thus apply an objectifying gaze. Such a gaze is one of the most ubiquitous manifestations of objectification (Fredrickson & Roberts, 1997). Additionally, self-schema theory (Markus, 1977) and self-reference effects (Rogers, Kuiper, & Kirker, 1977) explain how thoughts or schemata that define how individuals perceive themselves have a strong impact on how they process external stimuli. If an adolescent's self-image is based on an objectifying view of his/herself, this objectifying view will become more likely to play a role in their perception of friends as well. In sum, if exposure to sexualization on television or Facebook leads people to internalize appearance ideals and self-objectify, it can be expected that this objectifying view will not only be turned toward themselves but also to the people around them:

H2: Internalization of rewarded appearance ideals and self-objectification mediate the association between exposure to popular television and Facebook use and friend-objectification.

Pathway 2: Appearance Conversations on Facebook

Self-objectification and internalization can be seen as cognitive responses to sexualization (Fredrickson & Roberts, 1997; Vandenberg & Eggermont, 2012). Sexualizing experiences may also trigger behavioral appearance-oriented responses, for instance appearance-modification behaviors (e.g., dieting; Field et al., 2001) and social behavior (e.g., gender harassment; Galdi, Maass, & Cadinu, 2014). We expect that one of these behaviors might be adolescents' online appearance conversations with friends. Online media play an important role in adolescents' communication with peers (Davis, 2012) and appearance conversations may now particularly occur in an online setting. In line with studies on the relation between media use and offline appearance conversations (Clark & Tiggemann, 2006), a longitudinal study suggested an association between social media use and online appearance-focused conversations (de Vries, Peter, de Graaf, & Nikken, 2016). Adolescents who were more frequent users of a popular SNS received more appearance-related feedback (e.g., tips to look more beautiful) from friends.

Conversations about appearance with friends are an important dimension of an appearance culture (Jones, Vigfusdottir, & Lee, 2004). Prior research has shown that the presence of an appearance culture among friends – as indicated by the frequency of appearance conversations – is related to body image concerns and the perception that one's friends are preoccupied with their appearance (Webb et al., 2014). This preoccupation may also be reflected in adolescents' evaluations of their friends. Therefore, the current study will examine whether

appearance conversations with friends on Facebook are a second mechanism in the relationship between media use and friend-objectification:

H3: Exposure to popular television and Facebook use are indirectly related to friend-objectification through online appearance conversations with friends.

Gender Differences

The model presented in Figure 1 summarizes the hypothesized relationships. The present study will test for gender differences in these relationships. Objectification was originally described as an issue that is specific to the lives of girls and women (Fredrickson & Roberts, 1997). This focus on women is not surprising given the differences in the sexual socialization of boys and girls. Generally, the message is conveyed that an attractive appearance is more important for girls than for boys and that girls should act as gatekeepers toward the sexual urges of boys (Ward, 2003). Nonetheless, studies have found that boys and men are also susceptible to the impact of media on self-objectification (Aubrey, 2006; Vandebosch & Eggermont, 2013). Furthermore, men who self-objectify have also been found to objectify other men and women more (Strelan & Hargreaves, 2005). Previous research has reported gender similarities when studying how self-objectification is predicted by exposure to sexualizing media (e.g., Aubrey, 2006; Vandebosch & Eggermont, 2014, 2015). Research is lacking regarding gender differences or similarities in the relationships of friend-objectification with media use and the explanatory mechanisms in our model. As such, we will look into these differences:

RQ 1: Do boys and girls differ in the direct and indirect relationships between popular television and Facebook use and friend-objectification?

Method

Sample and Procedure

In 2016, Flemish (the Dutch speaking community of Belgium) secondary schools were contacted to take part in the current study. Schools that were familiar to the researchers were first contacted, followed by randomly selected schools from a database of the Belgian Department of Education. School heads were informed about the aims of the study and were asked to participate. In exchange for their participation, school heads and teachers of the 19 participating schools were invited to a colloquium on media and well-being organized by the host university.

A total of 640 12- to 18-year-olds ($M_{age} = 15.47$, $SD = 1.63$, 48.75% boys) and their parents were informed about study aims, procedures, and confidentiality. After active consent was obtained from parents and participants, paper-and-pencil questionnaires were filled out in class during class hours. Two research assistants were present at all times. No incentives were provided.

Measures

Control variables. BMI was calculated by dividing the participants' reported weight by their squared height. Participants' nationality was assessed by asking whether they were born in Belgium (=1) or in a different country (=2). Additionally, the participants' age and gender (1 = *male*, 2 = *female*) were included as control variables.

Viewing popular TV programs. Using a Likert scale ranging from 1 (= *never*) through 5 (= *almost every day*), participants rated their exposure to 41 current TV programs. The list included soap series, sitcoms, dramas, reality programs, and programs aimed at teenagers that were being broadcast during prime time on the main Flemish television channels. In line with prior research (e.g., Ward, 1995), we focused on the 20 most popular programs (i.e., the 20

programs that were most frequently watched as indicated by respondents' scores; e.g., *Ex on the Beach*, *Good Luck Charlie*) as popular programs among adolescents are known to frequently contain sexualizing messages (Ward, 2016). As such, participants' television viewing was assessed by calculating the mean of their viewing scores on these 20 programs.

Facebook use. With regard to social media use, the time respondents' typically spent using Facebook was assessed since Facebook was the most used social media platform among adolescents in Flanders at the time of the study (Van Waeg, D'Hanens, Dooms, & Naesens, 2016). In line with previous research (Frison, Subrahmanyam, & Eggermont, 2016), participants used 10-point scales to indicate how much time they spent on Facebook on an average weekday and weekend day; *0 hours* (=1), *+/-0.5h* (=2), *0.5–1h* (=3), *1–1.5h* (=4), *2–2.5h* (=5), *2.5–3h* (=6), *3–4h* (=7), *4–5h* (=8), *more than 5h* (=9), *I have Facebook open all day* (=10). Their response for weekdays was multiplied by five and that for weekend days was multiplied by two. These results were averaged to calculate a composite score of Facebook use per day.

Appearance conversations on Facebook. An adapted version of the Appearance Conversations subscale of the Appearance Culture among Peers Scale (Jones et al., 2004) was used. On a scale ranging from *Never* (=1) to *Very often* (=5), adolescents indicated how often they engaged in conversations about appearance topics that focused on their own and their friends' appearance (e.g., shape of their bodies, importance of looking attractive, how they wished their bodies would look like) on Facebook (publicly as well as in private messages) (Principal components analysis; eigenvalue = 3.68, explained variance = 73.62, $\alpha = .91$).

The internalization of rewarded appearance ideals. To study the extent to which adolescents internalize appearance ideals because they believe that certain benefits are associated with those ideals, as was suggested in prior literature (Trekels & Eggermont, 2017), the

Sociocultural Attitudes towards Appearance Scale (Thompson et al., 2004) was used in an adapted version designed by Trekels, Ward, and Eggermont (2018). This adapted scale consists of five items that start with “I want my body to look like the people who appear in magazines and on television...” (i.e., one item of the original scale). Five times, this statement was followed by a reference to a potential reward of compliance to appearance ideals. These rewards were “...because it would boost my self-confidence”, “...because I would be more popular with friends”, “...because I would get a girl/boyfriend more easily”, “...because I would be more happy”, and “...because I would feel better about myself”. Participants rated their agreement on a scale ranging from *I totally disagree* (=1) to *I totally agree* (=5) (PCA; eigenvalue = 3.36, explained variance = 67.13, $\alpha = .88$).

Self-objectification. Following Vandebosch and Eggermont (2012), an adapted version of the Self-Objectification Questionnaire (Noll & Fredrickson, 1998) was used to measure self-objectification. The participants rated the importance of 11 body attributes on a scale ranging from *not at all important* (=1) to *very important* (=10). Eleven body attributes were used instead of the usual 12 (Vandebosch & Eggermont, 2012) as a qualitative pilot study (384 boys and 344 girls, $M_{age} = 12.23$, $SD = .81$) (Rousseau, 2014) revealed that some teens had difficulty understanding one of the items (i.e., physical fitness). Principal component analyses were performed separately for boys and girls. One appearance-related factor and one competence-related factor were extracted. Among boys, the appearance-related attributes were muscle tone (factor loading = .83), physical attractiveness (.83), sex appeal (.83), muscular strength (.81), coloring (.70), weight (.61) (eigenvalue: 4.54; explained variance: 41.29%; $\alpha = .86$). Boys' competence-related attributes were health (.79), stamina (.76), physical energy level (.64), and physical coordination (.45) (eigenvalue: 1.28; explained variance: 11.61%; $\alpha = .62$). The item

“measurements” did not load on either factor. Among girls the appearance-related attributes were physical attractiveness (.82), sex appeal (.76), measurements (.73), weight (.65), coloring (.64) (eigenvalue: 1.76; explained variance: 15.96%; $\alpha = .77$). Girls' competence-related attributes were stamina (.78), muscular strength (.76), muscle tone (.72), physical energy level (.69), health (.50), and physical coordination (.55) (eigenvalue: 3.66; explained variance: 33.24%; $\alpha = .75$). Participants' levels of self-objectification were calculated as the difference between the mean scores on the appearance-related body attributes and the competence-related body attributes. Accordingly, positive values indicate that the participant values their appearance-related body attributes more highly than their competence-related attributes, whereas negative values indicate the opposite.

Friend-objectification. A new scale was created to measure friend-objectification. First, based on the literature on objectification theory and research on the application of a gaze, four items were formulated which assess the perceived importance of friends' physical appearance and sexual status (APA, 2007; Fredrickson & Roberts, 1997; Zurbriggen et al., 2011). The APA's (2007) definition of sexualization highlights that individuals are sexualized when they are valued based on strict appearance standards, which define their sexual appeal, and when they are perceived as sexual objects. Following this definition, the four items which represent sexualized attributes related to valuing friends for their appearance (two items), their sexual reputation (one item), and being an object of sexual attractiveness (one item). The evaluation of such sexualized attributes represents a gaze at one's outward appearance and sexual reputation, which does not necessitate that an individual gets to know this person (i.e., their personality) (Fredrickson & Roberts, 1997). A person is thus objectified when the sexualized attributes of their body and sexuality are separated from their other traits as a person. A second set of four items was

formulated to assess the perceived importance of friends' personality traits or competences as a friend. As such, a high perceived importance of friends' sexualized traits as compared to the importance of their personality/competence traits would constitute friend-objectification. The items of competence-related attributes were inspired by Armsden and Greenberg's scale on attachment to peers (1989) and the pleasant personality scale of a romantic partner (Eggermont, 2004). Similar to the measure for self-objectification, the difference in importance between these sexualized and competence attributes can give an indication of the extent to which adolescents objectify their friends.

Participants evaluated the importance of the eight attributes for their same-sex friends on a scale ranging from *completely disagree* (=1) through *completely agree* (=7). A principal component analysis identified two factors. The first factor consisted of the four competence-related items (eigenvalue: 2.79; explained variance: 34.90%; $\alpha = .85$). The items were "it is important that I..." "...can trust my friends" (factor loading = .86), "...can count on my friends when I need them" (.84), "...can have fun with my friends" (.80), and "...can be myself when I'm with my friends" (.81). On the second factor, the two appearance-related items loaded well: "it is important that my friends look good (for boys) / are pretty (for girls)" (factor loading = .83) and "... that my friends are muscular (for boys) / thin (for girls)" (.80). However, the two sexuality-related items had a moderate or poor factor loading: "it is important that my friends receive attention from girls (for boys) / boys (for girls)" (.64) and "... that there is no embarrassing gossip about my friends and girls (for instance about being bad at seducing girls) (for boys) / ... about my friends and boys (for instance about being a 'slut') (for girls)" (.47). Inclusion of the two sexuality-related items decreased Cronbach's alpha of the factor by .10 and .21 respectively. As such, the two sexuality-related items were dropped from the measure and the

sexualized component of the friend-objectification scale was only made up of the two appearance-related items (eigenvalue: 1.61; explained variance: 26.80%; Spearman-Brown coefficient = .76). As such, this two-item component is conceptually more similar to the sexualized component of the self-objectification scale which also only assessed physical appearance rather than sexual reputation. In line with the adapted measure of self-objectification (Vandenbosch & Eggermont, 2012), friend-objectification was calculated as the difference between the mean scores of the two appearance-related and the four competence-related items.

Analysis

The proposed model was tested using structural equation modeling with Mplus (Muthén & Muthén, 2017). Appearance conversations and internalization were entered as latent variables; all other variables were manifest variables as they did not represent a latent construct (i.e., popular TV viewing and Facebook use) or were calculated as difference scores (i.e., self-objectification, friend-objectification). The model controlled for gender, nationality, age, and BMI by modelling covariances with popular television viewing and Facebook use and predictive paths to the dependent variables. Popular TV viewing and Facebook use, were allowed to covary. Covariances were also modelled from appearance conversations to internalization and self-objectification. Two pathways, one through internalization and self-objectification (both will be tested simultaneously in a multiple mediation model, see Figure 1) and one through appearance conversations, will be tested. Although appearance conversations may lead to internalization and self-objectification or vice versa, the direction of these relationships are beyond the scope of this study, which aims to test these constructs as two distinct explanatory mechanisms¹.

Bootstrapping (95% bias-corrected bootstrapped confidence intervals [bc 95% bt CI];

1000 samples) was used to assess the significance of the paths in the model. Missing data were handled by full information maximum likelihood estimation in Mplus (Muthén & Muthén, 2017). Modification indices indicated that the fit of the model would improve by allowing a covariation between the error terms of two items of the internalization scale. As such, this covariation was included.

Results

Table 1 shows the descriptive statistics and zero-order correlations for the variables in the proposed model. The newly designed measure of friend-objectification is significantly correlated with internalization and among boys with self-objectification, which offers some indication for the construct validity of the measure². To study gender differences, a MANCOVA analysis was performed using Pillai's Trace and controlling for age, nationality, and BMI, $V = .38$, $F(6, 431) = 43.23$, $p < .001$, $\eta_p^2 = .38$. Subsequent separate ANCOVAs showed that girls reported higher values than boys for viewing popular TV programs, $F(1, 436) = 78.78$, $p < .001$, $\eta_p^2 = .15$; Facebook use, $F(1, 436) = 4.77$, $p = .03$, $\eta_p^2 = .01$; appearance conversations with friends on Facebook, $F(1, 436) = 25.35$, $p < .001$, $\eta_p^2 = .06$; the internalization of rewarded appearance ideals, $F(1, 436) = 14.04$, $p < .001$, $\eta_p^2 = .03$; and self-objectification, $F(1, 436) = 110.20$, $p < .001$, $\eta_p^2 = .20$. Only levels of friend-objectification were higher among boys than among girls, $F(1, 436) = 50.22$, $p < .001$, $\eta_p^2 = .10$.

In line with other self-objectification research among adolescents (e.g., Slater & Tiggemann, 2015; Vandenbosch & Eggermont, 2016), the respondents valued their competence-related body attributes more highly than the appearance-related attributes (boys: $M = -2.12$, $SD = 1.46$; girls: $M = -0.74$, $SD = 1.52$). Also the average levels of friend-objectification (boys: $M = -3.84$, $SD = 1.41$; girls: $M = -4.65$, $SD = 1.22$) indicated that adolescents valued competences such

as trust as more important than their friends' appearance. However, the average scores also indicated that appearance attributes were valued to some extent as important by adolescents.

Testing the Hypothesized Model

The hypothesized model presented in Figure 2 showed a good fit with the data, $\chi^2(97) = 246.71$, $p < .001$, CFI = .97, RMSEA = .05 (90% CI: .04/.06), $\chi^2/df = 2.54$. In this model, exposure to popular television and Facebook use did not directly predict friend-objectification, $\beta = .04$ (95% CI: -.060/.136), $SE = .05$ and $\beta = .04$ (-.071/.083), $SE = .02$ respectively. Thus, H1 was not supported in this model.

Exposure to popular television and Facebook use were positively related to self-objectification, $\beta = .11$ (.029/.186), $SE = .04$ and $\beta = .17$ (.098/.230), $SE = .03$, respectively. Exposure to popular television also significantly predicted participants' internalization of rewarded appearance ideals, $\beta = .19$ (.088/.286), $SE = .05$. Internalization was not predicted by Facebook use, $\beta = .06$ (-.035/.150), $SE = .05$. Further, self-objectification was directly related to friend-objectification, $\beta = .13$ (.027/.229), $SE = .05$. Internalization was not directly related to friend-objectification, $\beta = .11$ (.000/.201), $SE = .05$.

H2 hypothesized that exposure to popular television and Facebook use are indirectly related to friend-objectification through internalization and self-objectification. Exposure to popular television was indirectly related to self-objectification through internalization, $\beta = .04$ (.019/.078), $SE = .02$. The indirect relationship between popular television viewing and friend-objectification through internalization and self-objectification was significant, $\beta = .01$ (.001/.014), $SE = .00$. This result offers support for H2 regarding popular television viewing.

There was no indirect relationship between Facebook use and self-objectification through internalization, $\beta = .01$ (-.008/.039), $SE = .01$. Also, no indirect relationship was found between

Facebook use and friend-objectification through internalization and self-objectification, $\beta = .00$ ($-.001/.007$), $SE = .00$. This result does not support H2 regarding Facebook use.

H3 hypothesized that exposure to popular television and Facebook use are indirectly related to friend-objectification through the engagement in appearance conversations with friends on Facebook. Exposure to popular television and Facebook use both directly predicted appearance conversations, $\beta = .20$ ($.086/.311$), $SE = .06$ and $\beta = .22$ ($.140/.308$), $SE = .04$ respectively. In turn, the engagement in appearance conversations was positively related to friend-objectification, $\beta = .14$ ($.047/.232$), $SE = .05$. Popular television viewing was indirectly related to friend-objectification through appearance conversations, $\beta = .03$ ($.010/.061$), $SE = .01$. Similarly, Facebook use was indirectly related to friend-objectification through appearance conversations, $\beta = .03$ ($.010/.061$), $SE = .01$. Thus, H3 was supported.

Gender Differences

To test whether the results of the model varied by gender, a multiple group analysis was used in which the fit of a constrained model that expected the hypothesized pathways to be similar between boys and girls was compared to the fit of an unconstrained model that allowed gender differences in the hypothesized pathways. The fit of the unconstrained model, $\chi^2(194) = 408.31$, $p < .001$, CFI = .95, RMSEA = .06 (90% CI: .05/.07), $\chi^2/df = 2.10$, was not superior to the fit of the constrained model, $\chi^2(208) = 424.63$, $p < .001$, CFI = .95, RMSEA = .06 (90% CI: .05/.07), $\chi^2/df = 2.04$, $\Delta\chi^2(14) = 16.33$, $p = .29$. The difference in chi square was not significant and the difference in CFI did not reach the threshold of .01 (Wang & Wang, 2012). Thus, there was no evidence for gender differences in the hypothesized model.

Discussion

The aim of this study was to examine the associations between adolescents' media use and the extent to which they objectify their same-sex friends. Contrary to our first hypothesis, viewing popular TV programs and Facebook use was not directly related to higher levels of friend-objectification in the model. Two pathways were hypothesized, however, which revealed that media use was indirectly related to friend-objectification. As such, there appear to be specific conditions under which popular television and Facebook use affect the objectification of friends. More specifically, a process of internalization and self-objectification as well as an appearance culture seem to underlie the examined association.

The Internalization of Rewarded Appearance Ideals and Self-objectification

In support of prior research (e.g., Aubrey, 2006; Vandebosch & Eggermont, 2014), adolescents' diet of popular TV programs predicted self-objectification directly and indirectly through the internalization of *rewarded* appearance ideals. In line with social cognitive theory (Bandura, 2002) and prior research (Trekels & Eggermont, 2017), adolescents' exposure to popular television increased their tendency to report that they wanted to look like media figures because it would have a positive impact on their social status and self-perception. Moreover, in line with objectification theory, this measure of the internalization of rewarded appearance ideals mediated the relation between exposure to popular television and self-objectification (Moradi & Huang, 2008; Vandebosch & Eggermont, 2012). Perceived rewards thus play an important role in the explanation of why individuals internalize appearance ideals as a result of media exposure.

Although sexualizing photographs are prevalent on SNSs (Sarabia & Estévez, 2016), Facebook use was not associated with the internalization of rewarded appearance ideals. This particular finding could be explained by the conceptualization of rewarded appearance ideals that

includes the extent to which someone wants to look like the people on TV or in magazines. As Facebook mostly relies on contact with friends and acquaintances, future research may benefit from measuring SNS use to monitor celebrities or models or addressing internalization with a measure that not exclusively focuses on standards of appearance promoted on TV or magazines, but also on SNSs. Whereas the measure for television viewing was slightly more specific as it measured frequency of the most popular television programs as indicated by the sample and content analyses have concluded that appearance-related or sexualizing content is prevalently shown in these programs (Kim et al., 2007; Ward, 2016), the general measure of Facebook use could also explain the null finding.

In line with previous research, higher levels of self-objectification – in turn – related to more objectification of others (Davidson et al., 2015). This association between self-objectification and friend-objectification fits in with the “circle of objectification” (Lindner, Tantleff-Dunn, & Jentsch, 2012; Strelan & Hargreaves, 2005, p. 707). This refers to a process in which an internalized appearance focus leads self- and other-objectification to reinforce each other due to repeated comparisons of one’s own appearance to that of others. We focused on the predictive value of self-objectification for friend-objectification. However, future longitudinal research is advised to also explore the relationship in the opposite direction (other-objectification predicting self-objectification) and the possibility of a reciprocal relationship or “circle of objectification” (Strelan & Hargreaves, 2005, p. 707).

In sum, our findings suggested, in line with our second hypothesis, that adolescents’ exposure to popular TV programs can relate to friend-objectification indirectly, through internalization and self-objectification. Although adolescents in our study generally rated their own and friends’ competences higher than appearance, the results offer a relevant addition to the

literature. Numerous studies have shown that sexualizing media may trigger a self-objectification process that can impact several self-related cognitive and behavioral outcomes, such as body dissatisfaction (Myers & Crowther, 2007), sexual behavior (Vandenbosch & Eggermont, 2015), and self-sexualizing behavior (Trekels et al., 2018). The current study adds that this process can – indirectly – also affect adolescents' perceptions of friends. As a result, a media-induced objectifying view might have negative consequences on adolescent friendships through internalization of appearance ideals and an objectifying self-view. However, the mixed results with regard to Facebook use indicate that the relation between media use and friend-objectification may not exclusively be explained by the mechanisms inspired by objectification theory.

Appearance Conversations on Facebook

The findings indicated that popular TV programs and Facebook were predictive of more frequent online appearance conversations with friends. Moreover, such conversations were found to underlie the association between popular media use and friend-objectification (Hypothesis 3). A possible explanation may be the presence of an appearance culture among friends by which adolescents learn the value of an attractive physical appearance (Jones et al., 2004). In prior research, appearance conversations in particular have been found to increase the perceived importance of an attractive appearance (e.g., Clark & Tiggemann, 2006). The current study shows that an appearance culture among friends also plays a role in the way adolescents view and evaluate their friends.

Just as the relation between self- and friend-objectification remains unclear, so does the direction of the association between appearance conversations and friend-objectification. In an appearance culture among peers, appearance conversations, friend-objectification, and – perhaps

– media use may affect and reinforce each other. Future researchers may want to investigate the directions of these effects in more detail and develop a theoretical model that can explain how and why media use and online appearance conversations can predict friend-objectification.

Unlike the mechanism inspired by objectification theory (internalization and self-objectification), appearance conversations explained indirect relationships between both exposure to popular television and Facebook use and friend-objectification. Thus, although objectification theory may offer a partial explanation of the extent to which adolescents objectify their friends, other mechanisms seem to be at play as well.

Gender Differences and Similarities

The analyses following our research question revealed that the hypothesized associations did not differ between boys and girls. This confirms the findings of previous studies that boys are also influenced by the media's sexualizing content (Aubrey, 2006; Vandebosch & Eggermont, 2014). Although no differences were found in the current hypothesized relations, girls had higher mean values than boys on the measures in the model, except friend-objectification. Most of these differences were relatively small. Only the gender difference in self-objectification was slightly larger, with girls rating their appearance-related body attributes as almost as important as their competence-related attributes, whereas boys generally rated their competence-related attributes more clearly as more important. As such, self-objectification and its consequences may still be a greater issue in the lives of girls than boys. On the other hand, boys reported higher levels of friend-objectification. These results reflect the traditional expectations that men are the ones who objectify, whereas women are more likely to be the ones who are objectified (Fredrickson & Roberts, 1997). The latter finding has important implications for the design and effectiveness of media interventions. Specifically, whereas boys and girls would both benefit from a discourse

warning them about the sexualizing and appearance-focused content in both mass and social media, some differentiation between both groups may be warranted. For girls, initiatives aimed at preventing and reducing self-objectification remains crucial, also in light of the extrapolation of such an objectified view on others. Boys, on the other hand, might benefit from becoming more aware of the objectifying male lens towards others in the media as they might be more inclined to rely on such a lens in interpersonal relationships than girls.

Future Directions

Before more practical recommendations can be made about whether and how parents, schools or adolescents themselves should deal with the phenomenon of friend-objectification, more research is needed to uncover what the consequences of this objectifying view are. Research on college students' objectification of others in general showed that this type of objectification predicted more social comparison tendencies, which were, in turn, related to more body image disturbances and eating disorder symptomatology (Lindner et al., 2012). Future research could further investigate how friend-objectification contributes to an appearance culture and, in particular, its negative implications for body image. Research on the implications of objectification on individuals' judgements of others' personality and competences and prior findings showing a relation between objectification and lower relationship satisfaction led to the assumption that adolescents' friendships may also suffer from objectification (Vaes et al., 2011; Zurbriggen et al., 2011). Given the importance of friendships in adolescents' well-being (Hall-Lande et al., 2007), the potentially harmful effects of friend-objectification on friendship quality and well-being should be studied in more depth.

Limitations

A first limitation of the current study was its cross-sectional design. The design does not allow to confirm the causal directions suggested in the model. A second limitation was that our sample overrepresented white adolescents. Third, the respondents were only given two options to specify their gender, but a more inclusive approach toward gender could have been taken by adding a third option. A final set of limitations refers to some of the measures used in the study. Friend-objectification and self-objectification were computed as difference scores, which has been criticized as it can be unclear in which component of the score the effects occur (Griffin, Murray, & Gonzalez, 1999). However, in line with our objective to add to current literature on adolescent objectification, the measure was conceptualized in line the definition of objectification as a ratio between an appearance related and a non-appearance related component (Fredrickson & Roberts, 1997; Noll & Fredrickson, 1998; Vandebosch & Eggermont, 2012). One way in which future research could tackle the methodological and conceptual issues of reducing data to difference scores is the use of polynomial regression techniques which allow a three-dimensional interpretation of the association between valuing one's appearance, valuing one's character and a particular outcome. Furthermore, the new measure of friend-objectification needs further conceptualization and alternatives to the new measure should be tested. Additionally, the measure should be rigorously analyzed with regard to reliability and validity, especially considering that two of the four original appearance-related items had to be omitted from the analysis due to low factor loadings. Lastly, in order to improve model fit, two error terms in the measure of rewarded appearance ideals were correlated, which could indicate an issue in the structure of the measure (Hooper, Coughlan, & Mullen, 2008). Future research is needed to further support the test-retest reliability and validity of the newly developed measures.

Conclusion

In this study, we contributed to the literature on sexualizing media by examining adolescents' objectification of their same-sex friends. Viewing popular TV programs and using Facebook indirectly predicted higher levels of friend-objectification through the engagement in appearance-related conversations with friends on Facebook. Additionally, the internalization of rewarded appearance ideals and self-objectification may further explain why popular television viewing predicts a stronger tendency to objectify same-sex friends. This study adds to the objectification literature by studying the role of Facebook use and appearance conversations on Facebook and by adding friend-objectification as one of the possible consequences of the objectification process. Future research is encouraged to study the implications that a more objectified view of friends may have on adolescents' relationships with their friends.

Notes

1. The data of this study have also been used in another paper. This paper can be acquired by sending an email to [identifying data deleted].

2. Although an in-depth study of the reliability and validity of the new friend-objectification scale would be an important next step if work on this measure is continued in the future, a full examination is beyond the scope of the present study. Nonetheless, some preliminary analyses regarding the scale were conducted in a separate sample. This sample consisted of 437 emerging adults, $M_{\text{age}} = 21.18$ ($SD = 1.51$; range = 17-24), 54.0% female. Data were collected in 2016.

The internal consistency was comparably high in the emerging adult as in the adolescent (i.e., the current study's) sample for the competence-related factor (eigenvalue: 3.06; explained variance: 51.00%; $\alpha = .89$) and the appearance-related factor (eigenvalue: 1.62; explained variance: 27.06%; Spearman-Brown coefficient = .78). Although the study of the emerging adult sample was not conducted with a validity test of the friend-objectification scale in mind, four measures were selected for a preliminary test of construct and discriminant validity. In support of construct validity, friend-objectification was positively correlated ($r = .10$, $p = .04$) with the internalization of appearance ideals subscale of the SATAQ-3 (Thompson et al., 2004) and negatively correlated ($r = -.10$, $p = .04$) with a measure of friendship quality (Armsden & Greenberg, 1989). In support of discriminant validity, the measure was not significantly correlated ($r = -.03$, $p = .62$) with a general measure of (not appearance-related) social comparison (Schneider & Schupp, 2014). Contrary to our expectations, however, friend-objectification was not significantly correlated with self-objectification in the emerging adult sample ($r = .08$, $p = .09$). Also in the adolescent sample (of the current study), friend-

objectification was only significantly correlated with self-objectification among boys but not among girls (see Table 1), but self-objectification was significantly related to friend-objectification in the analytical model (see Figure 2). Overall, these results offer some preliminary support for the reliability and validity of the new friend-objectification scale but a more in-depth analysis is needed.

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Table 1

Zero-order correlations, means, and standard deviations for the studied variables

	Nationality	BMI	Age	Popular TV viewing	Facebook use	Appearance conversations	Internaliz ation	Self- objectificati on	Friend- objectificati on
Nationality	1	-.04	-.14*	.06	-.01	-.04	-.10	-.07	.02
BMI	.11	1	.29***	.14*	.10	-.11	.02	.08	-.04
Age	-.04	.27***	1	-.04	.17**	-.04	.08	.18**	-.01
Popular TV viewing	-.04	.14*	.16**	1	.26***	.19**	.10	.19**	.07
Facebook use	-.02	.10	-.02	.14*	1	.26***	.05	.19**	.05
Appearance conversations	-.03	.06	.11*	.23***	.24***	1	.32***	.31***	.26***
Internalization	.03	.29***	.21***	.23***	.16**	.34***	1	.35***	.23***
Self- objectification	-.06	.23***	.34***	.25***	.30***	.25***	.32***	1	.26***
Friend- objectification	.05	-.10	-.02	.14*	.08	.20***	.18**	.09	1
Mean (<i>SD</i>) <i>boys</i>		20.41 (3.63)	15.48 (1.66)	1.61 (.49)	4.24 (2.33)	1.33 (.55)	2.14 (.81)	-2.12 (1.46)	-3.84 (1.41)
Mean (<i>SD</i>) <i>girls</i>		20.25 (2.85)	15.46 (1.60)	2.08 (.65)	4.88 (2.31)	1.68 (.71)	2.43 (.84)	-.74 (1.52)	-4.65 (1.22)

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; Correlation coefficients below the diagonal are from girls; coefficients above the diagonal are from boys.