

Abstract

This experiment examines the effect movies portraying stereotypical sex roles have on sexual gender stereotypes and rape myths among adolescents and emerging adults ($N = 116$). After watching a stereotypical sex role movie or a control movie, participants completed a survey on their acceptance of male and female sexual stereotypes, and rape myths. Results showed that male and female adolescents who watched the stereotyped movie subsequently reported more acceptance of male and female stereotypes, and rape myths. No effects were found among the emerging adults. Social learning theory and media priming are used in discussing these findings. Adolescents have lesser identity maturity, and learn about gender through media characters. Emerging adults may be more critical about media content than adolescents.

Keywords: Media effects, Sexual stereotypes, Rape myths, Adolescents, Emerging adults

Effects of Stereotypical Sex Role Movies on Adolescents and Emerging Adults

Entertainment media such as popular movies have been criticized for promoting gender stereotypical portrayals of the sexual roles of men and women. For instance, women are frequently depicted as sex objects (i.e., objectification), while men are typically portrayed as obsessed with sex (Ward, 2016). Research has repeatedly (though not always consistently) shown that such biased gender role portrayals relate to media users' stereotypical attitudes about sexual gender roles. More precisely, experimental studies have shown that media content can prime recipients' previously learned gender stereotypical judgements and conduct (Roskos-Ewoldsen, Roskos-Ewoldsen, & Carpentier, 2002).

Exposure to media models acting in a sexual stereotyped way, may lead viewers to accept these stereotypes through social learning (Bandura, 2001). According to priming theory (e.g., Bargh & Chartrand, 2000), subsequent media content that includes stereotypical sex role cues trigger these already existing sexist beliefs in people's minds. Some research (e.g., Roskos-Ewoldsen et al., 2002) suggests that such so-called activated beliefs may even include rape myths. Rape myths are stereotyped or false cultural beliefs about rape, which blame victims and exonerate perpetrators (Burt, 1980; Lonsway & Fitzgerald, 1994). For example, the belief that women with provocative dress are responsible for rape. Scholars (e.g., Burt, 1980) have suggested that gender stereotypical movies may increase rape myth acceptance. These social learning and media priming effects are particularly relevant, since empirical evidence has shown that gender-related beliefs, such as rape myths and sexual stereotypes, are an important sociocultural promoter of violent behavior against women (Stith, Smith, Pen, Ward, & Tritt, 2004).

Developmental psychologists (e.g., Arnett, 1995, 2013) have suggested that social learning and media priming effects on gender beliefs occur particularly among adolescents and emerging adults compared to older adults. During these developmental life phases (adolescence and emerging adulthood), sexuality and gender are central for individuals, and they use media as a reference for their gender identity formation (Arnett, 1995). Moreover, due to maturing reasons, differences have been suggested to take place between adolescents and emerging adults. For instance, it has been found that the developmental level directly affects viewers' ability to process and understand sexual media content (e.g., Villani, 2001; Ward, 2003).

The present study aims to contribute to the research on the effects of entertainment media and gender stereotypical sex roles. We conducted an experiment among adolescents and emerging adults to study the effects movies portraying stereotypical sex roles have on participants' sexual gender stereotypes and rape myths. Furthermore, we aim to address three gaps in the field:

First, our study focuses on movies since they are one of the understudied media genres (Ward, 2016). This gap is particularly relevant regarding adolescents and emerging adults, because their movie consumption is high (Coyne, Padilla-Walker, & Howard, 2013). Furthermore, research has suggested that adolescents and emerging adults adopt gender ideals from movies (e.g., Greenberg, Siemicki, Dorfman, et al., 1986).

Second, scholars have pointed out that research on this topic and emerging adults is mainly cross-sectional (Coyne et al., 2013). On the other hand, experiments among adolescents have shown inconsistent results regarding the relationship between gender stereotypes and TV viewing (e.g., Greenberg, Linsangan, & Soderman, 1993; Ward & Friedman, 2006). Hence, our

laboratory study contributes to the understanding of media effects on both adolescents and emerging adults.

Third, although research claims that adolescents are more susceptible to sexual media effects than (emerging) adults, empirical research is lacking. Adolescents lack advanced critical skills and are still developing their sexual identity (Arnett, 1995). These developmental tasks may increase their susceptibility to sexual media effects. However, two of the rare studies examining sexual media effects among adolescents and adults, including emerging adults, could not support this assumption (Peter & Valkenburg, 2011). These studies did focus on sexually explicit media content and thus not on mainstream media content. To further clarify this issue, our study examines the effects entertainment movies with stereotypical sexual content have on male and female adolescents and emerging adults.

Sexual Gender Stereotypes, Rape Myths and Media

Gender stereotypes are generalized preconceptions about women and men (Williams & Bennett, 1975; Eagly and Mladinic, 1989; Bussey and Bandura, 1999). In particular, traditional sexual gender stereotypes imply that women are valued for their appearance and sexual appeal, while men are considered attractive when they look tough and cool (Ward, 2002; Ward & Friedman, 2006). According to sociology theorists, gender differences promote an unequal social order and discriminate women (Bussey and Bandura, 1999). Research has shown that men often endorse to sexism more than women do (e.g., Johannesen–Schmidt & Eagly, 2002).

Gender is also the most powerful predictor of rape (Koss, Goodman, Browne, Fitzgerald, Keita, & Russo, 1994; Rozee & Koss, 2001). Specifically, sexual gender stereotypes predict individual's support of rape myths (Burt, 1980; Jackson, 1995; Rozee & Koss, 2001). "Rape is the logical and psychological extension of a dominant-submissive, competitive, sex role

stereotyped culture” (Burt, 1980, p.229). According to Cuklanz (1998), and Lonsway and Fitzgerald (1994), some of the most common rape myths are that a victim is to blame because she wears a provocative dress, has a suggestive behavior, or a bad reputation. A study review by Suarez and Gadalla (2010) found that men tend to believe in rape myths more than women (e.g., Aosved & Long, 2006). Furthermore, Lonsway and Fitzgerald (1994) found that rape myths allowed men to justify rape. Regarding women, Kahlor and Morrison (2007) suggest that rape myths may foster the belief among women that they are not susceptible to this crime because rape victims are different from them. Overall, it is known that beliefs about rape are difficult to change (Roze & Koss, 2001).

Attitudes toward sexual gender stereotypes and rape myths are culturally constructed rather than biologically developed, and originate in social interactions (Bandura, 1986; Epstein, 1997; Lagaert, Van Houtte, & Roose, 2017). These beliefs are part of our “cultural violence”, since they are an aspect of our culture that legitimizes different kinds of violent conduct against women and girls (Galtung, 1990, p.291).

TV, Movies, Sex and Gender

Media, and youth media in particular, frequently promote heterosexual stereotypes (e.g., Kim, Lynn Sorsoli, Collins, Zylbergold, Schooler, & Tolman, 2007). They present romantic and sexual relationships based on adversarial roles assigned to women and men (Kim et al., 2007; Rudy, Popova, & Linz, 2010, 2011; Kirsch & Murnen, 2015).

Sexual content appears in approximately 85% of major motion pictures (Jamieson, More, Lee, Busse, & Romer, 2008). Concretely, sex is common in popular movies with white and heterosexual characters (Gunasekera, Chapman, & Campbell, 2005; Hefner & Wilson, 2013). It has been shown that both U.S. (Kunkel, Farrar, Eyal, Biely, & Donnerstein, 2007) and European

entertainment TV (e.g., Eggermont, 2006) promote biased sexual messages. For example, men are portrayed in TV as dominant and sex driven characters, and women as physically attractive sex objects (e.g., Eyal & Finnerty, 2009; Vervloessem, Vandenbosch, & Eggermont, 2011).

Impact of the Media

Televised Media and Movie Effects. Media use can generate short and long-term changes in recipients' attitudes and behavior (Valkenburg, Peter, & Walther, 2016). Past correlational and experimental research have shown that the use of televised media is related to a particular set of sexual beliefs among adolescents (e.g., Ward & Friedman, 2006; Ter Bogt, Engels, Bogers, & Kloosterman, 2010) and emerging adults (e.g., Ward, 2002). As compared to emerging adults, adolescents are expected to become more easily influenced by TV content because of their lower level of reasoning abilities, lower amount of life experience, including sexual experiences, and greater idolization of media characters (Gruber & Grube, 2000).

Cross-sectional studies have found that adolescents who regularly consume TV content presenting women as sexual objects, tend to agree more often with gender stereotypes that objectify women (Ward & Friedman, 2006; Rivadeneyra & Lebo, 2008). Regarding emerging adults, Ward's (2002) correlational results also showed that TV exposure positively related to gender attitudes and stereotypes about sexual relationships. Moreover, a study among male college students reported that greater exposure to mainstream media - namely, movies, magazines, and music videos - was associated with an increased agreement with the sexual stereotype that men are sex driven (Ward, Epstein, Caruthers, & Merriwether, 2011).

Experimental research among adolescents has shown inconsistent results regarding the relationship between gender stereotypes and TV viewing. Some studies have found that exposure to sexual content triggers increased support of sexual stereotypes (Ward, Hansbrough, & Walker,

2005; Ward & Friedman, 2006), whereas null findings have occurred in other studies (Greenberg et al., 1993). In relation to emerging adults, Ward's (2002) laboratory findings showed an effect of TV viewing on sexual stereotypes. In particular, women exposed to TV images depicting men as sex driven and women as sexual objects, showed greater support to these stereotypes than women in control groups. However, null findings were found in this same experiment among male participants (Ward, 2002). According to Ward (2003), this gender difference could be explained by the reliance on different information sources regarding sexual learning. Men may rely less on the media and more on other sources such as friends than women. In spite of these mixed findings, Ward (2003) points out that overall laboratory studies tend to show that exposure to sexual media content is associated to greater stereotypical perception of sexual relationships.

In relation to rape myths, there have also been conducted cross-sectional and laboratory studies. Cross-sectional studies have shown that televised media contribute to rape culture through the objectification and portrayal of sexual violence against women (e.g., Kahlor & Eastin, 2011). A study among college women by Kahlor and Morrison (2007) showed a link between daily TV viewing and rape myth support. In particular, women who consumed more TV were more likely to believe that rape accusations were false. On the other hand, an experiment among undergraduates found that individuals' film predilections affected the acceptance of rape myths. In particular, participants, namely men, with sex and violence film predilections were more supportive of rape myths than students with love story or suspense film predilections, who were mainly women (Emmers-Sommer, Pauley, Hanzal, & Triplett, 2006). In addition, another laboratory study found that scenes from popular R-rated movies that sexually objectified women

had an effect on the perception of date rape among male college students (Milburn, Mather, & Conrad, 2000). Concretely, participants thought that the victim “got what she wanted” (p.660).

Two theoretical perspectives have often been used in previous research to explain how media exposure can influence stereotypes about gender and sex; social learning theory and media priming.

Social learning. Social learning theory posits that individuals can learn by observing the behavior of others (Bandura, 2001). These others can be media models such as characters in a movie. The theory suggests that social learning will particularly take place when the behavior is performed by attractive models and is rewarded (Bandura, 2001). Thus, if an attractive character in a movie acts in a stereotypical or sexually objectifying way and if this behavior is met with positive consequences, viewers may learn that this behavior is appropriate and develop more positive cognitions towards sexual gender stereotypes. Beside these media content characteristics, certain characteristics of the viewer will also impact the social learning process (Bandura, 2001). Viewers are more likely to learn from media models when they perceive the content as personally relevant. Because adolescence is characterized by a growing interest in sex and the opposite gender (Arnett, 2013), adolescents may be especially likely to learn from mediatized depiction of sexual gender stereotypes.

Media Priming. Media priming refers to more immediate effects that media content exert on users’ judgements and conduct (Roskos-Ewoldsen et al., 2002). According to the principles of media priming, a stimulus or prime (e.g., movie content) can re-activate a stereotype that is already stored in memory because it was learned previously (e.g., through social learning) (Roskos-Ewoldsen, Klinger, & Roskos-Ewoldsen, 2007; Roskos-Ewoldsen & Roskos-Ewoldsen, 2009). Priming theory thus assumes that a cognitive association between the

so-called nodes has been developed in the past. For instance, a relationship between ‘women’ and ‘sexual objects’ may have been developed. According to Arendt and Marquart (2015), pre-existing implicit stereotypes moderate the media priming effect on explicit stereotypes.

Evidence shows that media can prime stereotypes (e.g., Hansen & Hansen, 1988; Hansen & Krygowski, 1994; Power, Murphy, & Coover, 1996; Arendt & Marquart, 2015), and rape myths (e.g., Malamuth & Check, 1985). In turn, the primed stereotypes will guide individuals’ perceptions of the stereotyped group (Hansen & Hansen, 1988; Hansen & Krygowski, 1994; Malamuth & Check, 1985; Pechmann, 2001; Power et al., 1996; Roskos-Ewoldsen et al., 2002). Such indirect effect is labelled with the concept of spreading activation (e.g., Domke, Shah, & Wackman, 1998).

To sum up, research has shown that popular movies often promote stereotypical gender roles. Through social learning, viewers can develop gender stereotypes after observing stereotyped behavior in media content. Priming theory suggests that later media messages may reactivate or prime previously learned gender stereotypical attitudes and rape myths in the viewers’ minds. Empirical research supports these assumptions. Based on past research, the first hypothesis of this study is the following:

H1: Watching a movie portraying stereotypical sex roles positively predicts sexual gender stereotypes and rape myths among adolescents and emerging adults.

Adolescence and Emerging Adulthood

Developmental Theories. Adolescence is the life period between childhood and adulthood (Alfieri, Ruble, & Higgins, 1996). Adolescents undergo relevant and rapid changes at the physical, social and psychological level (Christie & Viner, 2005). One important change is identity-formation, which is a process surrounded by tensions (Erikson, 1968). This implies the

generation of a self-structure (Marcia, 1980), including their social and sexual selves consistent with socially accepted roles (Bem, 1981).

Adolescents are being socialized into their adult roles (Hill & Lynch, 1983), and their gender roles, sexual attitudes, and behaviors are being shaped (American Academy of Pediatrics, 1995; Arnett, 1995). For example, they learn how society defines masculinity and femininity (Ward et al., 2005). Hence, during adolescence, the salience of gender role norms may be intensified (Hill & Lynch, 1983; Huston & Alvarez, 1990). In addition, adolescents' continuing cognitive maturation implies that their gender roles are less likely to be consolidated (Parsons, 1942). Thus, the lack of strong guides for gender roles (Alfieri et al., 1996) should lead adolescents to be flexible towards gender norms (Eccles, 1987). That is, adolescents tend to be open to change their gender beliefs.

On the other hand, emerging adulthood is the distinct life stage after adolescence that can be ranged from 18-29 years old (Arnett, 2015), particularly in industrialized nations (Coyne et al., 2013). Similar to adolescence, this is a period of exploration and identity formation (Rindfuss, 1991; Arnett, 1998; Waterman, 1999), when individuals have not yet assumed stable adult roles (Arnett, 2015). However, emerging adults tend to be more mature and independent than adolescents (Arnett, 2015). Also, their greater experience, including romantic and sexual experiences, leads them to a greater self-understanding (Arnett, 2015). Thus, it is expected that their gender beliefs are more consolidated compared to adolescents' gender perceptions.

Despite the developmental differences between emerging adults and adolescents, studies have found gender similarities among both age groups. Overall, male emerging adults and adolescents are more socially motivated to adjust to masculinity norms than females to femininity (Cann, 2014). Moreover, research has found that boys and men usually resist

femininity (Martin, 1993; Martino, 1999). This can be explained because male gender attributes are socially valued, whereas feminine characteristics are devalued (Lagaert et al., 2017). For instance, it is socially positive to perceive that men are sex driven while it is a negative perception that women are sex objects.

Media Use of Adolescents and Emerging Adults. Emerging adults interact with media content around 12 hr a day (Alloy Media & Marketing, 2009), and adolescents around 11 hr a day (Kaiser Family Foundation, 2010). In particular, both U.S. (Schooler, Sorsoli, Kim, & Tolman, 2009) and European (e.g., Eggermont, 2006) adolescents have been shown to watch TV for around 21 hr per week.

According to the theory of broad and narrow socialization (Arnett, 1992, 1995), media are one of the main sources of socialization for both adolescents and emerging adults (Corney et al., 2013). Socialization implies learning to adopt one's culture (Spiro, 1994), which includes gender roles (Arnett, 1995).

Regarding adolescents, a key use of media is related to identity formation (Arnett, 1995). For example, adolescents turn to media to learn about gender, and romantic and sexual relationships (Brown & Hendee, 1989; Larsen, 1990; Greenberg, Brown, & Buerkel-Rothfuss, 1992; Arnett, 1995; Steele & Brown, 1995; Brown, Halpern, & L'Engle, 2005). Adolescents may perceive that media offers the "forbidden fruits" that parents or educators do not talk about (Sutton, Brown, Wilson, & Klein, 2002, p.26). Hence, adolescents could perceive media as their "'ideal' sexual educator" due to its accessibility, openness and attractive content (Ward & Friedman, 2006, p.134). In addition, media may serve as a "super peer" for adolescents (Strasburger & Wilson, 2002). This media function is relevant, since adolescents are particularly susceptible to peer pressure (Strasburger & Wilson, 2002), and seem to consider popular media

as a sexual super peer (Brown, Halpern, & L'Engle, 2005). For example, a cross-sectional study found that adolescents felt that TV encouraged them to have sex (Brown, Childers, & Waszak, 1990).

Adolescents may be particularly vulnerable to sexual content in TV messages due to the developmental phase they are living (Ward & Friedman, 2006). Their cognitive skills are not fully developed, and they may find it difficult to critically analyze media content (Gruber & Grube, 2000). Adolescents may rely on the media to evaluate themselves and reduce their confusion regarding their developing identity, which increases the possibility of social learning from media models (Bandura, 2001; Marcia, 1980). They may be open to new information (Furman & Simon, 1999) presented by the media, since it facilitates them to reconsider their previous gender beliefs and form new ones.

Compared to adolescence, there is less research on emerging adulthood and media's role in identity development (Coyne et al., 2013). However, it is clear that emerging adults also use media to develop their identity (Coyne et al., 2013). For instance, a study from Lonsdale and North (2011) found that they turned to TV and movies to build and express their identity. Also, like adolescents, certain media content, such as sexually-related messages, can impact them in a positive or negative way (Coyne et al., 2013). Overall, media is a source of learning (Bandura, 1986, 2002), and provides emerging adults with information that guides them to make life decisions (Arnett, 2000). Moreover, based on the uses and gratifications theory (Katz, Blumler, & Gurevitch, 1974), they seek the media to satisfy their needs (Swanson, 1979; Rubin, 2002; Coyne et al., 2013). For example, emerging adults use media to explore their gender and sexuality identity (Coyne et al., 2013).

In short, research suggests that adolescents and emerging adults turn to media for identity development. However, we can expect that adolescents are more strongly affected after media exposure than emerging adults because of adolescents' lesser cognitive maturation and lesser consolidated beliefs compared to emerging adults. Based on past research, the second hypothesis of this study read:

H2: Adolescents are more susceptible than emerging adults to the influence of movies portraying stereotypical sex roles on sexual stereotypes and rape myths.

Method

Participants and Procedures

This between-subjects experiment was conducted among a sample of adolescents and emerging adults ($N = 116$). The adolescents ($n = 63$, $M_{age} = 15.77$, $SD = 2.01$) were recruited through secondary schools and youth organizations. Adolescents' parents signed an informed consent form in which the purpose of the study was explained. The emerging adults in the sample ($n = 53$, $M_{age} = 28.21$, $SD = 2.65$) were found by sharing requests to participate on Facebook and through a snowball sampling procedure. 57% of adolescents and 70% of emerging adults were male.

According to the cover story, participants were taking part in two unrelated studies. The first study was described as a marketing study that included watching a movie and completing a survey about the movie. The second, supposedly unrelated study included a survey about the everyday life of emerging adults. Among adolescents, the research was organized in the accommodation provided by the collaborating schools or youth organizations. Among emerging adults, the study took place at the university or at the homes of the researchers who guided the study. Generally, the experiment lasted two hours in total, of which the first 90 minutes were

spent watching the film. After the study, the participants were debriefed about the purpose of the research.

A total of 49 participants (47% adolescents, 69% males) were assigned to the stereotypical sex role movie condition. These participants watched the movie *Friends with Benefits*. This movie was selected by a group of students who were trained in recognizing stereotypical sex roles in media content. The movie is highly sexually stereotypical as the physical attractiveness of the male and female characters is commented upon by the other characters and emphasized by the camera (i.e., a gaze is applied) (Fredrickson & Roberts, 1997; APA, 2007). Moreover, using others as objects for sex with little consideration for their emotions (i.e., sexual objectification) is a central theme in the movie (APA, 2007). The 67 participants in the control condition (60% adolescents, 58% males) watched an animated movie with little or no stereotypical sex role content (*Ice Age*).

Measures

Male sexual stereotypes. To measure respondents' agreement with stereotypes about males as sex-driven, we made use of a subscale of Ward's (2002) Attitudes About Dating and Sexual Relationships Measure. A five-point scale ranging from *I totally disagree* (= 1) to *I totally agree* (= 5) assessed agreement with seven statements, such as "men are always ready and willing for sex" and "men are mostly interested in women as potential sex partners and don't want to be 'just friends' with them" (eigenvalue = 2.82, explained variance = 40.32%, $\alpha = .75$).

Female sexual stereotypes. The subscale for stereotypes about women of Ward's (2002) Attitudes About Dating and Sexual Relationships Measure was used to measure respondents' agreement with stereotypes about the importance of women's appearance. Agreement was measured using a five-point scale ranging from *I totally disagree* (= 1) to *I totally agree* (= 5).

After a principal component analysis, six of the eight items were selected (eigenvalue = 2.78, explained variance = 34.79%, $\alpha = .74$). Example items are “women should be more concerned about their appearance than men” and “using her body and looks is the best way for a woman to attract a man”.

Rape myth acceptance. An abbreviated version of Burt’s (1980) Rape Myth Acceptance Scale was used. Participants used a five-point scale ranging from *I totally disagree* (= 1) to *I totally agree* (= 5) to indicate agreement with six items of the original scale. Following a principle component analysis one item was removed as it limited the reliability of the scale. The resulting scale showed a good reliability (eigenvalue = 2.52, explained variance = 50.44%, $\alpha = .75$). Items included “in the majority of rapes, the victim has a bad reputation” and “one reason that women falsely report a rape is that they frequently have a need to call attention to themselves”.

Enjoyment of the movie. The degree to which the participants enjoyed the movie was measured using three statements with a five-point scale ranging from *I totally disagree* (= 1) to *I totally agree* (= 5) ($\alpha = .73$). The statements were “I liked the movie”, “I would like to watch the movie again” and “I would recommend the movie to my friends”.

Demographic information. Participants reported their gender and date of birth. Gender (1 = *male*, 2 = *female*) and age group (1 = *adolescent*, 2 = *emerging adult*) were included in the analyses as predictor variables and moderators.

Data analysis

Multivariate analyses of covariance (MANCOVA) were calculated to compare differences in rape myth acceptance and sexual gender stereotypes based on the movie condition (experimental or control movie), their age group (adolescent or emerging adults), and their

gender (male or female). Furthermore, interaction effects between these categories were tested.

In the subsequent separate ANCOVAs, Bonferroni correction was used to limit the probability of making type I errors. In line with prior research on media effects on gender stereotypes, the analyses controlled for participants' enjoyment of the movie (Ward & Friedman, 2006).

Results

Means and standard deviations for the variables under study as well as zero-order correlations can be found in Table 1. A t-test showed that there were no significant differences in enjoyment of the movie between the participants who watched the experimental movie ($M = 2.19$; $SD = 0.72$) and those who watched the control movie ($M = 2.16$; $SD = 0.55$), $t(85.46) = -0.24$, $p = .81$. Chi-square tests indicated that both genders and age groups were equally distributed across the movie conditions, $\chi^2(1) = 1.52$, $p = .22$, and $\chi^2(1) = 1.86$, $p = .17$ respectively.

In order to test the hypotheses, a MANCOVA using Pillai's Trace was calculated. The degree to which participants enjoyed the movie was included in the analysis as a control variable. The analysis revealed that there were significant differences between participants in the two movie conditions with regard to sexual gender stereotypes and rape myth acceptance, $V = .07$, $F(3, 107) = 2.86$, $p = .04$, $\eta^2 = .07$. Significant differences in these outcomes were also found between the two age groups, $V = .40$, $F(3, 107) = 23.34$, $p < .001$, $\eta^2 = .40$. The analysis revealed no significant gender differences, $V = .05$, $F(3, 107) = 1.75$, $p = .16$, $\eta^2 = .05$.

Subsequent univariate ANCOVAs revealed a main effect of movie condition on sexual stereotypes about males, $F(1, 109) = 8.60$, $p = .004$, $\eta^2 = .07$. More specifically, agreement with stereotypes about males was higher among those who watched the stereotypical sex role movie ($M = 2.72$; $SD = 0.08$) than those who watched the control movie ($M = 2.42$; $SD = 0.07$). No

significant main effects for movie condition were found regarding sexual stereotypes about females, $F(1, 109) = 3.49, p = .07, \eta^2 = .03$, or rape myth acceptance, $F(1, 109) = 0.96, p = .33, \eta^2 = .01$.

Additionally, main effects were found of age group on each of the outcomes. Adolescents showed a higher acceptance than emerging adults of male stereotypes (adolescents: $M = 2.69; SD = 0.07$, emerging adults: $M = 2.45; SD = 0.07, F(1, 109) = 5.40, p = .02, \eta^2 = .05$), female stereotypes (adolescents: $M = 3.30; SD = 0.08$, emerging adults: $M = 2.89; SD = 0.08, F(1, 109) = 13.81, p < .001, \eta^2 = .11$), and rape myth acceptance (adolescents: $M = 2.54; SD = 0.08$, emerging adults: $M = 1.63; SD = 0.08, F(1, 109) = 68.75, p < .001, \eta^2 = .39$).

In addition, interaction effects were explored. The MANCOVA revealed no significant interaction effect between movie condition and the participants' gender, $V = .01, F(3, 107) = 0.23, p = .88, \eta^2 = .01$. The analysis did reveal a significant interaction effect between movie condition and age group, $V = .20, F(3, 107) = 8.65, p < .001, \eta^2 = .20$. Means and standard deviations of the three outcomes for each of the groups are given in Table 2. The separate ANCOVAs showed that among adolescents, those who watched the experimental movie showed higher acceptance of male stereotypes, $F(1, 109) = 32.10, p < .001, \eta^2 = .23$, female stereotypes, $F(1, 109) = 11.25, p = .001, \eta^2 = .09$, and rape myth acceptance, $F(1, 109) = 7.25, p = .01, \eta^2 = .06$, than those who watched the control movie. Among the emerging adults, no significant differences between the movie conditions were found, male stereotypes: $F(1, 109) = 2.45, p = .12, \eta^2 = .02$; female stereotypes: $F(1, 109) = 0.56, p = .46, \eta^2 = .01$; rape myth acceptance: $F(1, 109) = 1.72, p = .19, \eta^2 = .02$.

These results offered partial support for Hypothesis 1. Watching a stereotypical sex role movie activated sexual gender stereotypes and rape myths among adolescents, but not among

emerging adults. Since no differences between the movie conditions were found for emerging adults, Hypothesis 2 was supported. The adolescents were more strongly influenced by the stereotypical sex role movie than the emerging adults.

Discussion

The relationship between the media and gender stereotypes has been a major focus of study of media effects. However, little research attention has been paid to this topic concerning adolescence and emerging adulthood, and the differences between these age groups. Also, certain media genres such as movies have not received much attention. The knowledge gap regarding these age groups is remarkable, since it is known that adolescents' and emerging adults' media consumption, including movies, is high (e.g., Alloy Media & Marketing, 2009; Kaiser Family Foundation, 2010) while they undergo a developing period characterized by the construction of attitudes such as gender beliefs (e.g., Arnett, 1995, 1998, 2015).

Our findings offer some support for the priming effect of stereotypical sex role movies on adolescents' sexual stereotypes and rape myths. The results also show that these movies have different effects among adolescents and emerging adults.

H1 expected that a movie portraying stereotypical sex roles would activate sexual gender stereotypes and rape myths among adolescents and emerging adults. H2 suggested such effects would especially occur among adolescents and would be less strong among emerging adults. Our results support movie effects for adolescents, but we observe null findings for emerging adults. We did not only find that adolescents are to a greater extent affected than emerging adults, but also that emerging adults are *not* affected by movie exposure. Hence, our results are consistent with previous experiments that show that televised media portraying stereotypical sex roles influence gender and sexual stereotypes among adolescents (Ward et al., 2005; Ward &

Friedman, 2006). On the contrary, our results are inconsistent with Ward's (2002) experiment regarding female emerging adults, whose TV viewing influenced their acceptance of sexual stereotypes.

A first explanation for these findings relates to priming theory. A gender stereotypical movie thus primed pre-existing stereotypes in adolescents' minds. That is, the movie stimulus activated the beliefs that women are sexual objects, men are sex driven, and rape myths. Following priming theory (e.g., Bargh & Chartrand, 2000; Roskos-Ewoldsen & Roskos-Ewoldsen, 2009), adolescent participants are expected to have these stereotypes stored in their minds. As these stereotypes are accessible in their minds, they are easily re-activated when exposed to a stimulus that portrays them, as pointed out, for example, in the meta-analysis on media priming by Roskos-Ewoldsen et al. (2007). These available stereotypes bias adolescents' processing of information and their opinions regarding men, women, and rape. However, even when preexisting stereotypes are activated (i.e., primed) in media users' minds, they can choose not to act upon these stereotypes (Wright, 2011). This could explain why emerging adults were not affected by the experimental movie. Perhaps gender stereotypes were activated, but the emerging adults felt that they were not appropriate for the evaluation of subsequent situations.

A second explanation for these findings relates to the literature on developmental theory and social learning principles. Adolescents' greater susceptibility could be explained by developmental reasons, as Ward and Friedman (2006) had previously pointed out. Our results suggest, following Arnett (2015), that adolescents and emerging adults undergo distinctive stages in their identity process regarding gender beliefs. This difference seems to influence movie priming.

Both adolescents (e.g., Marcia, 1980) and emerging adults (e.g., Arnett, 1998; Waterman, 1999) experience a process of identity formation. However, adolescents' identity may be less developed and go through a period of greater tension (Erikson, 1968) than emerging adults. Adolescents are organizing their beliefs (Marcia, 1980; Arnett, 1995), particularly around socially accepted roles (Bem, 1981). Thus, the significant movie effect on adolescents could derive from their flexibility towards gender norms, as suggested by Eccles (1987). Adolescents' weak or undefined gender roles (Parsons, 1942; Alfieri et al., 1996), may make them more susceptible to change their gender perceptions due to social learning from media content dealing with gender issues. In contrast, emerging adults' greater identity maturity, self-understanding and experience compared to adolescents (Arnett, 2015), make their cognitions concerning gender roles more stable.

The short-term exposure effect that was found among adolescents warrants attention. Prior research has also shown that adolescents seem to use media content portraying stereotypical sex roles to learn about gender and sexual relationships, as it is suggested by past research (e.g., Brown & Hendee, 1989; Larson, 1990; Arnett, 1992, 1995; Greenberg, Brown & Buerkel-Rothfuss, 1992; Arnett, 1995; Steele & Brown, 1995; Bandura, 2002; Brown, Halpern & L'Engle, 2005; Phinney, 2006; Ward and Friedman, 2006; Padilla-Walker, 2007). Also, adolescent participants showed more stereotypical gender views than emerging adults in general. Thus, adolescents seem to be a potential risk group for developing harmful gender attitudes. Moreover, attitudes are likely to influence behavior (e.g., Allport, 1935; Briñol & Petty, 2012). Hence, adolescents exposed to stereotypical movies may have greater probabilities of acting in a sexist or violent way against women, as shown in the meta-analysis of Stith et al. (2004).

Study limitations must be considered. First, media priming experiments observe immediate effects. We do not know the long-term effects of stereotypical sex role movies among these age groups. For this, we need to conduct, for example, longitudinal studies. Second, stereotype scales measure explicit stereotypes and rape myths. Future research could consider using implicit measures to observe underlying stereotypes and attitudes, especially among emerging adults.

To sum up, our results suggest that movies portraying stereotypical sex roles play a greater role in adolescents' sexual attitudes as compared to emerging adults. Adolescents are known to be more open for adapting to gender norms than emerging adults. In comparison, emerging adults show more stable gender beliefs. Also, they may have learned about critical views toward gender stereotypical attitudes which may prevent them from accepting gender stereotypical attitudes when being activated by a movie.

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Appendix A

Table 1

Zero-order Correlations, Means, and Standard Deviations.

	Age group	Gender	Enjoyment	Male stereotypes	Female stereotypes	Rape myth acceptance
Age group	1	-.13	-.05	-.06	-.27**	-.58***
Gender		1	-.15	-.28**	-.04	-.05
Enjoyment			1	.07	-.08	.08
Male stereotypes				1	.57***	.38***
Female stereotypes					1	.44***
Rape myth acceptance						1
<i>M (SD)</i>			3.71 (0.74)	2.54 (0.60)	3.08 (0.59)	2.10 (0.71)

*Note: *p < .05; **p < .01; ***p < .001*

Appendix B

Table 2

*Means and Standard Deviations for Male and Female Stereotypes and Rape Myth**Acceptance as a Function of Age Group and Movie Condition*

	Adolescents				Emerging adults			
	Stereotypical sex				Stereotypical sex			
	role movie		Control movie		role movie		Control movie	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Male								
Stereotypes	3.11***	0.12	2.26	0.08	2.33	0.10	2.57	0.11
Female								
Stereotypes	3.56**	0.13	3.03	0.09	2.83	0.11	2.95	0.11
Rape Myth								
Acceptance	2.76**	0.13	2.32	0.09	1.52	0.11	1.73	0.12

Note: Asterisks indicate that the mean for the stereotypical sex role movie condition differs

significantly from the control condition within the same age group. * $p < .05$; ** $p < .01$;

*** $p < .001$