BRIEF REPORT

Rejected by Peers—Attracted to Antisocial Media Content: Rejection-Based Anger Impairs Moral Judgment Among Adolescents

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Adolescence is an important developmental stage during which both peers and the media have a strong influence. Both peer rejection and the use of morally adverse media are associated with negative developmental outcomes. This study examines processes by which peer rejection might drive adolescents to select antisocial media content by tying together developmental research on peer rejection and research on media effects. Assumed underlying mechanisms are rejection-based anger and frustration and the adolescent’s moral judgment. A between-participants experimental design manipulated peer rejection versus acceptance in adolescents (Mage = 13.88 years; N = 74) and young adults (Mage = 21.37 years; N = 75), applying the Cyberball paradigm. Measures included the State Anger Inventory (STAXI) to assess feelings of rejection and the newly devised Media, Morals, and Youth Questionnaire (MMaYQue) to assess media preferences and moral judgment of media content. Using bootstrapping analyses, a double mediation was established: Higher levels of state anger in peer-rejected adolescents induced more tolerable moral judgments of antisocial media content, subsequently instigating a preference for antisocial media content. In contrast, the young adult sample showed no relations between peer rejection and antisocial media preference. Results are discussed within a downward spiral framework of combined peer and media influences.

Keywords: peer rejection, adolescence, antisocial media content, moral judgment, anger

Reality shows, YouTube clips, and video games are highly popular among youth. However, such media often portray high levels of antisocial behavior and a world wherein unhealthy, aggressive, and risky behaviors seem risk free (e.g., reckless driving, drugs abuse, bullying; Brown & Witherspoon, 2002). The popularity and increase of such antisocial media content are worrisome to many parents, pediatricians, and psychologists because such media content has been shown to have detrimental effects on adolescent health (Anderson et al., 2010; Strasburger, 2009; Strasburger, Jordan, & Donnerstein, 2010). Clearly, there is a need for research on factors that might elicit adolescent preferences for antisocial, violent, and risky media content.

From the extant literature, we know that adolescents especially have an increased preference for antisocial media content (Funk & Buchman, 1996; Roe, 1995), while precisely these youngsters also are the most susceptible to detrimental media influences, given their developmental stage (Dahl & Hariri, 2005; Rich & Bar-on, 2001). However, not all adolescents are influenced in similar ways by media, in particular by media portraying antisocial, risky, and immoral behaviors. Personal dispositions and specific circumstances seem to act in tandem with media influences, making some adolescents more at risk than others (Anderson, Gentile, & Buckley, 2007; Krcmar & Kean, 2005). From the general aggression model (GAM; Anderson & Bushman, 2002), we know that person variables and situation variables have a combined influence on emotions, cognitions, arousal, and behavior, which act together in sorting effects from exposure to violent media. The present study aims at more precisely identifying which specific circumstances may act together with adolescents’ specific media use by taking their developmental stage into account. Therefore, we build on the GAM in further extending and specifying these relationships for adolescents who are attracted to media content portraying antisocial, risky, and immoral behaviors. In the following, we propose a model in line with the GAM arguing that adolescents who are rejected by peers are particularly prone to such media effects in showing a preference for antisocial media content. We further argue that this effect is mediated by increased levels of rejection-based anger and frustration, which impairs adolescents’ moral judgment of such media content.

A Process Model on Adolescents’ Antisocial Media Preferences

Over the past years, researchers have reported on the negative consequences of adolescents’ use of antisocial, risky, and morally disvalued media content. Such media content negatively affects
adolescent development by inducing high levels of aggression and risky and unhealthy behaviors (Anderson et al., 2010; Strasburger, 2009; Strasburger et al., 2010). Moving beyond the question whether certain types of media content have negative effects, research has now started to focus on the question of why certain media content has negative effects and in whom (Bushman & Anderson, 2002). According to the GAM (Anderson & Bushman, 2002), personal variables (i.e., individual differences) interact with situational variables, influencing an individual’s present internal state. The internal state includes cognitions, affects, and arousal, which influence one another in determining the subsequent appraisal and decision-making process that may ultimately lead to aggressive behaviors.

The GAM has brought important insights in the effects of adolescents’ violent media use. However, research thus far has hardly addressed the question why adolescents are particularly attracted to violent, antisocial, and risky media content. Therefore, the present study focuses on explaining adolescents’ media preferences and extends the GAM in three ways: First, the present study aims at explaining the input side of the GAM by studying why adolescents are attracted to antisocial, immoral, and risky media content. Second, our study contributes in focusing on a wider array of media fare—not only media violence, but rather a broader range of antisocial, immoral, and risky behaviors as portrayed in the media. Third, we specify the GAM in view of developmental theorizing, examining which adolescents are more attracted to antisocial media content than others.

The GAM defines two sorts of input variables, person variables and situation variables, which together lead to a present internal state. We propose that the developmental stage of adolescence (person) in combination with peer rejection (situation) induces a present internal state in which feelings of rejection-based anger (affect) impair moral judgment (cognition) of media content, subsequently leading to the outcome of an increased preference for antisocial media content.

Adolescents and Peer Rejection (Step 1)

During adolescence, peers come to play a major role in the lives of adolescents, often more important than the adolescents’ parents. Adolescents strongly depend on their peers for emotional security and normative behavior (Berndt, 1982; Field et al., 2001; Krosnick & Judd, 1982). Importantly, secure relationships with peers are associated with social and emotional competence (Laible, 2007; Laible, Carlo, & Raffaelli, 2000; Nickerson, 2005). However, not all adolescents are accepted by their peers, as some get rejected and feel they don’t belong to a group. Research states that peer-rejected youngsters form a vulnerable group for negative developmental outcomes, including aggression, antisocial behavior, and adjustment problems (Coie, Dodge, & Kupersmidt, 1990; Juvonen, Graham, & Schuster, 2003), and are more likely to drop out from school (Buhs & Ladd, 2001).

While peer rejection is hurtful at any point in life, especially during adolescence peer rejection is extremely painful (Davey, Yücel, & Allen, 2008; Prinstein & Aikins, 2004). The development in social cognition makes adolescents highly aware of their social situation (Sebastian, Viding, Williams, & Blakemore, 2010) and of the consequences and social costs of failing in these situations (Davey et al., 2008). Consequently, adolescents attach high value to the opinions and appraisals of others and are very much concerned about peer acceptance (Hawley, Little, & Pasupathi, 2002), while they are extremely sensitive to being rejected by peers and respond to it with intense negative emotions like anger and frustration (Coie et al., 1990; Juvonen et al., 2003; Kochenderfer-Ladd, 2004).

Because specific brain areas related to acquiring cognitive skills that are needed for emotion regulation are still developing during adolescence (Casey, Jones, & Hare, 2008; Steinberg, 2005), adolescents find it difficult to deal effectively with intensely felt emotions (Garnefski, Kraaij, & Spinhoven, 2001). The brains of older individuals, for example young adults, are further developed, which increases the ability to successfully regulate emotions. In comparison to adolescents, young adults use more elaborate emotion regulation skills (Garnefski & Kraaij, 2006). Therefore, young adults will be better able to deal with, for example, rejection-based emotions. In brief, both adolescents and young adults will be influenced by peer rejection; however, adolescents lack the skills to effectively regulate the associated emotions. Therefore, it is expected that specifically the combination of being adolescent and being rejected by peers will lead to an internal state of emotional reactivity that will affect the adolescent’s cognitions in terms of moral judgment.

Rejection-Based Anger and Moral Judgment of Media Content (Step 2)

The GAM proposes that the input variables lead to a certain internal state that influences behavioral outcomes; in our case this behavior refers to a preference for antisocial media content. As peer rejection will lead to intense feelings of anger and frustration in adolescents, the question is how this may affect their behavior in terms of media preferences. One way in which emotions may affect media preferences is in the emotion regulation beliefs of adolescents. Youngsters seem to believe that using antisocial media (e.g., violent video games and loud music) helps them in dealing with feelings of anger and frustration (Arnett, 1991; Olson, 2010; Olson, Kutner, & Warner, 2008). Therefore, rejection-based feelings of anger and frustration may make adolescents prone to a preference for antisocial media content, as a means of emotion regulation. However, research on these beliefs has shown that the use of violent media in response to feelings of anger is not an effective way of dealing with these emotions and may even lead to increased aggression (Bushman, 2002; Bushman, Baumeister, & Phillips, 2001).

Another route through which rejection-related feelings of anger and frustration in adolescents may affect their media preferences is via cognitions like moral judgment. Following the GAM, the mutual influence of emotions and cognitions determines the behavior in which the cognitive route plays a key role (e.g., schemata and knowledge structures; Anderson & Bushman, 2001, p. 356). Research shows that negative moods can be linked to self-focused moral judgments and behavior. For example, anger triggered in one situation automatically elicits blame cognitions in other situations (Quigley & Tedeschi, 1996). Likewise, people primed with anger increased their punitive attribution and judgment of characters in fictional tort cases (Lerner, Goldberg, & Tetlock, 1998).

Moreover, a recent study showed that anger influenced judgments of moral permissibility (Ugazio, Lamm, & Singer, 2012). This
change in moral judgment induced by feelings of anger could be further explained by overarousal: People in negative moods focus on their own needs instead of the needs of others, which inhibits their prosocial moral judgments (Eisenberg, 2000; Eisenberg et al., 1994). The anger and frustration resulting from being rejected will therefore narrow the adolescent’s moral judgment to self-interest and hinder prosocial moral judgment.

Moral Judgment of Media Content and Media Preferences (Step 3)

While the GAM defines three routes from person and situation inputs to outcome behavior, the cognitive route seems specifically tied to the content of the media (Anderson & Bushman, 2001). Therefore, we assume that the preference for antisocial media content in peer-rejected adolescents will finally be mediated by their cognitive moral judgment of the media content. Moral judgments are important in defining media preferences. Media users act like “untiring moral monitors” (Zillmann, 2000, p. 54) judging the acts of a media character as acceptable or unacceptable, subsequently determining their liking of media content. The moral dimension has empirically been shown to be the most important determinant of appreciation for a character and his or her deeds (Konijn & Hoorn, 2005; van Vugt, Hoorn, Konijn, & De Bie Dimitriadou, 2006). When people judge the behavior in the media as tolerable, this would in general instigate a stronger preference for the media content than when someone judges the media content as immoral or intolerable (Zillmann, 2000).

In sum, our process model includes three steps representing a double mediation in between peer influence and media preferences. We argued that within the present state induced by the combined influence of adolescence and peer rejection, intense feelings of anger and frustration impair adolescents’ moral judgment of antisocial media content, subsequently leading to a preference for this type of media content. In the following, we describe how we have tested our assumptions.

Method

Participants and Design

Participants were 74 adolescents (34 boys, 40 girls; $M_{\text{age}} = 13.88$ years, $SD = 1.10$; age range 12–16 years) and 75 young adults (16 male, 59 female; $M_{\text{age}} = 21.37$ years, $SD = 2.25$; age range 18–27 years). The adolescents were recruited from two randomly selected middle schools in very different parts of the Netherlands, one rural area and one urban area. The schools can be considered common middle class schools with a majority of white Caucasian pupils, no specifics that would distinguish them from other middle schools. Participants represented adolescents of various educational ability and socioeconomic levels. The young adult sample consisted of Dutch university students, primarily Caucasian, participating for course credit. All participants were randomly assigned to one of the experimental conditions by the computer.

In a between-participants experimental design, we manipulated peer acceptance versus rejection by means of the Cyberball paradigm (Williams, Cheung, & Choi, 2000). Cyberball is a virtual game in which a ball is thrown between three participants, one of whom is played by the study’s participant. Participants in the accepted condition ($N_{\text{adolescents}} = 35; N_{\text{young adults}} = 34$) received the ball one third of the time. In the rejected condition ($N_{\text{adolescents}} = 39; N_{\text{young adults}} = 41$) participants received the ball twice in the beginning of the game and never again for the remaining throws. Cyberball represents a controlled social situation wherein participants are randomly assigned to the rejected or accepted condition, making it possible to study causal relations between peer rejection and the dependent variables.

Procedure

The experimental setup for the two samples (adolescents and young adults) was as similar as possible. The adolescents were individually seated in a computer-equipped classroom with headphones, while young adults were seated in individual cubicles in the university’s media lab. On the computer screen, participants were informed they would be playing a virtual game of catch. Participants were led to believe they played with two other participants, peers who were taking the study at the same time in another school. Actually, the other two players in the game were computer generated. After 30 throws, the game ended and the participant was instructed to click on a link to direct him or her to an online questionnaire. In all, the experiment took approximately 20 min. Upon completion, participants were thanked and fully debriefed.

Measures

All variables were measured using Likert-type items, followed by 5-point rating scales (1 = not at all, 5 = very much).

Manipulation check. To check for peer rejection/acceptance, participants completed the three-item Perceived Levels of Belonging Questionnaire (Zadro, Williams, & Richardson, 2004; e.g., “While playing the game, I felt accepted by the other players”). Cronbach’s alpha reliability index was .75.

Rejection-based anger. Participants’ feelings of anger and frustration were measured by completing the 10-item state-anger section of the Spielberger State–Trait Anger Expression Inventory (STAXI; Fuqua et al., 1991; Spielberger, 1996). The scale covered anger-related negative feelings (e.g., “I feel frustrated”). Cronbach’s alpha was .92.

Media preference. To assess media preferences, we developed the Media, Morals, and Youth Questionnaire (MMaYQue) based on antisocial and risk behavior categories in Gardner and Steinberg (2005). This scale contains 22 descriptions of YouTube clips, 14 descriptions covering antisocial behavior (e.g., “Youngsters scolding at a police officer and pushing him off his motorbike”; “Two boys sexually harass a girl in the schoolyard”). Furthermore, for reasons of comparison, eight descriptions covered neutral/social behavior (e.g., “Boys outplay a police officer in a soccer game at a festival”; “Cat playing a song on the piano”). The descriptions of the clips were formatted as they appear on YouTube and pretested and selected for comparable likeability.

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1 The Dutch middle school system uses standardized tests to divide students into different educational ability levels. Based on the scores of these tests, students are divided and advised to continue their education at either low, middle, or high ability schools (van Dijk & Tellegen, 1994).
Participants indicated the extent to which they preferred to watch each of the described clips. Items were compiled into a mean index, separately for antisocial media content (α = .94) and neutral/social media content (α = .73).

**Moral judgment.** The above described MMaYQue was elaborated with questions as to how morally accepted participants thought the behavior in the description was (e.g., “To what extent do you think this behavior is normal?”; “To what extent do you think this behavior is accepted?”). Items were compiled into a mean index, separately for antisocial media content (α = .93) and neutral/social media content (α = .89).

While the MMaYQue has been newly developed for the purposes of the present study, this scale has meanwhile been used in a variety of studies and consistently shows a good internal structure as well as good criterion and discriminant validity (Plaisier & Konijn, 2012). Based on the extant literature in related areas, results on the MMaYQue are in line with expectations. That is, adolescents scoring high on trait aggressiveness and sensation seeking scored higher on preferences for antisocial media content (r_{aggression} = .48, p < .01; r_{sensation seeking} = .40, p < .01) and showed more lenient moral judgment of antisocial media content (r_{aggression} = .44, p < .01; r_{sensation seeking} = .29, p < .01) as measured by the MMaYQue. In addition, adolescents scoring higher on trait empathy showed a lower preference for antisocial media content (r = −.38, p < .01) and judged these types of media content as less tolerable (r = −.35, p < .01). Furthermore, as would be predicted, boys scored higher on a preference for antisocial media content (M = 2.59, SD = .94) than girls (M = 1.79, SD = .78; p < .01) and judged this type of content as more tolerable (M = 3.93, SD = .72) in comparison to girls (M = 3.70, SD = .64; p < .01). Thus, the MMaYQue seems to be very promising as a measurement device for purposes of establishing levels of preferences for antisocial media content and moral judgments of such content.

**Results**

Using an independent samples t test, we found significant gender differences in antisocial media preferences, t(147) = −5.85, p < .01, and moral judgment of antisocial media content, t(147) = −2.16, p < .05. Males showed a stronger preference for antisocial media content (M = 2.94, SD = 1.02) and judged antisocial media content as more tolerable (M = 1.78, SD = 0.63) than females did for antisocial media preferences (M = 1.95, SD = 0.96) and moral judgment (M = 1.58, SD = 0.49). This finding is in accordance with what would be expected from the literature on gender differences in media use (Hoffner & Levine, 2005) and thereby contributes to the validity of our measurement of moral judgment and media preferences. Therefore, gender was treated as a covariate in the analyses to control for possible moderating effects. Participants’ educational ability level (cf. IQ) did not affect any of the following effects and is therefore not included in the analyses below. All descriptive statistics can be found in Table 1.

**Manipulation Check**

Independent samples t tests were conducted across the two rejected/accepted conditions and participants’ perceived levels of belonging. For the adolescent sample, participants in the rejected condition reported feeling significantly less accepted (M = 2.79, SD = 1.05) than participants in the accepted condition (M = 3.66, SD = 0.83), t(70.96) = −3.96, p < .01, d = 0.92. In the young adult sample, participants in the rejected condition also scored lower on perceived levels of belonging (M = 2.06, SD = 0.80) than participants in the accepted condition (M = 3.80, SD = 1.16), t(58.74) = −7.50, p < .01, d = 1.75. Thus, the manipulation was successful in both groups.

**Analyses of Direct and Indirect Effects**

Using an innovative nonparametric bootstrapping procedure (as recommended by Hayes, Preacher, & Myers, 2010), we tested the data for simple and double mediation. This procedure overcomes many of the problems associated with traditional mediation methods (e.g., Baron & Kenny, 1986; Hayes, 2009; Zhao, Lynch, & Chen, 2010). The bootstrapping procedure tests whether an indirect effect exists or whether the indirect path between the independent and dependent variable (via Mediator 1 and Mediator 2) is significant (Hayes, Preacher, & Myers, 2010). Furthermore, it tests whether this indirect path explains the direct path in which the mediators are absent. Because this procedure uses fewer parameter estimates, power remains high, reducing possible Type II errors (Preacher & Hayes, 2004). Also, resampling the data overcomes the problem of nonnormal distribution, yielding more accurate parameter estimates, which further reduces possible Type I errors (Preacher & Hayes, 2008). This analytical strategy is therefore highly useful for small to moderate samples (Preacher & Hayes, 2008).

Table 1

<table>
<thead>
<tr>
<th>Sample</th>
<th>Anger</th>
<th>Antisocial media content</th>
<th>Neutral/social media content</th>
<th>Media preference</th>
<th>Antisocial media content</th>
<th>Neutral/social media content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adolescents</td>
<td>1.87 (0.99)</td>
<td>1.68 (0.65)</td>
<td>3.09 (0.96)</td>
<td>2.70 (1.18)</td>
<td>2.81 (0.99)</td>
<td></td>
</tr>
<tr>
<td>Rejected</td>
<td>2.10 (1.16)</td>
<td>1.79 (0.69)</td>
<td>3.26 (0.93)</td>
<td>2.67 (1.20)</td>
<td>2.76 (0.95)</td>
<td></td>
</tr>
<tr>
<td>Accepted</td>
<td>1.61 (0.69)</td>
<td>1.58 (0.60)</td>
<td>2.90 (0.96)</td>
<td>2.74 (1.17)</td>
<td>2.86 (1.06)</td>
<td></td>
</tr>
<tr>
<td>Young adults</td>
<td>1.43 (0.54)</td>
<td>1.60 (0.42)</td>
<td>3.62 (0.57)</td>
<td>1.86 (0.79)</td>
<td>3.11 (0.79)</td>
<td></td>
</tr>
<tr>
<td>Rejected</td>
<td>1.49 (0.56)</td>
<td>1.55 (0.43)</td>
<td>3.49 (0.57)</td>
<td>1.84 (0.72)</td>
<td>3.19 (0.79)</td>
<td></td>
</tr>
<tr>
<td>Accepted</td>
<td>1.31 (0.40)</td>
<td>1.65 (0.41)</td>
<td>3.77 (0.54)</td>
<td>1.89 (0.89)</td>
<td>3.02 (0.79)</td>
<td></td>
</tr>
</tbody>
</table>

Note. Data are means with standard deviations in parentheses.
Mediation was analyzed using ordinary least square (OLS) regressions to estimate total and direct effects of peer rejection on antisocial media preferences (see Figure 1). For indirect effects, percentile-based bootstrap confidence intervals (CI) and bootstrap estimates of standard errors were generated (number of bootstrap samples = 1,000). When zero is not between the upper and lower bounds of the confidence interval, it can be claimed with 95% confidence that the assumed indirect effect is not zero, indicating a significant indirect effect.

**Peer Rejection and Preferences for Antisocial Media Content**

**Adolescent sample.** Analyses showed a significant direct effect of peer rejection on anger \( (a_1; b = -.49, p < .05) \), with rejected adolescents reporting more anger than those in the accepted condition. A clear direct effect of anger on moral judgment of antisocial media content was also found \( (a_2; b = .27, p < .01) \); adolescents with higher levels of rejection-based anger had more tolerable moral judgments of antisocial media content. Furthermore, participants reporting tolerable judgments were higher in their preferences for antisocial media content \( (b_2; b = .32, p < .01) \). Finally, the direct effect of peer rejection on antisocial media preferences was nonsignificant \( (c; b = .07, p = .80) \). Bootstrap estimates showed a significant indirect effect of peer rejection on antisocial media preferences, via anger and moral judgment \( (point \ estimate = -.11, 95\% \ CI [-.25, -.01]) \), supporting a full double mediation model. All path coefficients are reported in Figure 2.

**Young adult sample.** Rejection in young adults did not significantly influence anger levels \( (a_1; b = -.18, p = .13) \). Furthermore, the young adult participants who reported higher levels of anger did not differ significantly from young adults reporting lower levels of anger in their moral tolerance toward antisocial media content \( (a_2; b = .15, p = .13) \). However, results did show a direct effect between moral judgment and their preferences for antisocial media content, with young adults reporting a higher tolerance having a stronger preference for antisocial media content \( (b_2; b = .58, p < .01) \). In line with this result, bootstrap analyses showed no significant indirect effects. Thus, for young adults, being rejected by peers did not lead to stronger preferences for antisocial media content.

**Peer Rejection and Preferences for Neutral/Social Media Content**

For reasons of comparison, the effects of peer rejection on preferences for neutral/social media content were also tested because we predicted that the effect of adolescents being rejected by peers would primarily affect preferences for media portraying antisocial behavior.

**Adolescent sample.** To test the relationships between peer rejection and the preference for neutral/social media content, we analyzed another double mediation model using bootstrap analyses. Again, results showed a significant direct effect of peer rejection on anger \( (a_1; b = -.49, p < .05) \), with rejected adolescents reporting more anger than those who were accepted. The direct effect of anger on moral judgment of prosocial media content, however, was only marginally significant \( (a_2; b = .23, p = .06) \). Yet, adolescents' moral judgment of neutral/social media content had a direct effect on the preference for this type of media \( (b_2; b = .43, p < .01) \). None of the other direct effects were significant, and bootstrap analyses showed no significant indirect effects. Thus, no indirect effects of peer rejection on preferences for neutral/social media content occurred.

**Young adult sample.** Again, OLS regression analyses showed no significant effect of peer rejection on anger for the young adults \( (a_1; b = -.18, p = .13) \). Furthermore, results did show a significant effect of peer rejection on moral judgment of neutral/social media content \( (a_2; b = .27, p < .05) \), with peer-rejected young adults rating neutral/social media content as more tolerable than accepted young adults. Moral judgment significantly influenced the preference for neutral/social media content \( (b_2; b = .47, p < .01) \) such that participants with a more tolerable moral judgment toward the neutral/social media content showed stronger preferences for this type of media. Bootstrap analyses, however, did not show significant indirect effects. Thus, again, there was no indirect effect of peer rejection on preferences for neutral/social media content.

![Figure 1. Causal steps in mediation test, according to Hayes, Preacher, and Myers (2010).](image)
be established. Clearly, more research is needed to sort this out and
social media content, while for young adults this relation could not
why for adolescents peer rejection leads to a preference for anti-
(Garnefski & Kraaij, 2006; Steinberg, 2005). This may explain
therefore deal more effectively with rejection-based emotions
generally have more developed emotion regulation skills and will
emotions induced by peer rejection (Casey et al., 2008; Garnefski
sents lack the skills to effectively deal with the intense negative
situations (Davey et al., 2008), making adolescents, in comparison
to (young) adults, hypersensitive to peer rejection (Davey et al.,
Prinstein & Aikins, 2004). Due to the underdevelopment of
moral judgment was closely tied to a preference for antisocial
media portrayals. As expected from developmental literature, these
findings were unique for adolescents and could not be established
for young adults.

The present findings are in line with developmental literature
showing that peer rejection has a large impact on adolescents.
During this developmental stage, youngsters are highly susceptible
to social feedback from peers (Steinberg, 2008) and become highly
aware of the consequences and social costs of failing in social
situations (Davey et al., 2008), making adolescents, in comparison
to (young) adults, hypersensitive to peer rejection (Davey et al.,
Prinstein & Aikins, 2004). Due to the underdevelopment of
sufficient and appropriate emotion regulation strategies, adoles-
cents lack the skills to effectively deal with the intense negative
emotions induced by peer rejection (Casey et al., 2008; Garnefski
et al., 2001; Steinberg, 2005). Young adults, on the other hand,
generally have more developed emotion regulation skills and will
therefore deal more effectively with rejection-based emotions
(Garnefski & Kraaij, 2006; Steinberg, 2005). This may explain
why for adolescents peer rejection leads to a preference for anti-
social media content, while for young adults this relation could not
be established. Clearly, more research is needed to sort this out and
identify different emotion regulation skills of adolescents and
(young) adults in view of their media use.

Likewise, due to the underdevelopment of emotion regulation
strategies, adolescents may believe that using media containing
high levels of antisocial behavior will help them in dealing with
rejection-based feelings of anger and frustration. These “cathartic”
beliefs appear to be rather strong, for example, among video game
players (Arnett, 1991; Olson, 2010; Olson et al., 2008). Thus far,
only a few studies have tested such cathartic effects of media use,
showing that individuals who use violent media content in the
belief that this would help them to cope with anger were even more
aggressive afterward (Bushman, 2002; Bushman et al., 2001).
Thus, referring to antisocial media content to regulate rejection-
based anger and frustration seems an ineffective emotion regula-
tion strategy. Future research is needed to more precisely study
how (beliefs in) emotion regulation strategies affects media use.

While not all adolescents are negatively influenced by antisocial
media content (Krcmar & Kean, 2005) and exposure to this type of
content may be seen as a normal part of youth development
(Goldstein, 1998; Kirsh, 2003), our results suggest that adolescents
who are rejected by their peers may be more at risk for potentially
negative developmental outcomes. While we did not measure the
effects of media exposure as such, it is likely that the peer-rejected
youngsters who showed a stronger preference for antisocial, risky,
and immoral media content will in turn be more susceptible to
negative media effects. This is in accordance with the assumed
long-term repeated exposure to violent media effects in the GAM
(Anderson & Bushman, 2002) as well as with a reinforcing down-
ward spiral model in which media selection and effects mutually
reinforce each other (Slater, Henry, Swaim, & Anderson, 2003).
That is, antisocial media selection in adolescence as a response to
peer rejection will influence beliefs, attitudes, and behavior ac-
cordingly, leading to even stronger preferences for antisocial me-
dia content, which would result in a downward spiral of ongoing
negative influences (Slater, 2004, 2007; Slater et al., 2003).
Furthermore, as predicted by the GAM, exposure to antisocial media
content may produce aggression-related knowledge structures and
a hostile expectation bias (Bushman & Anderson, 2002). This may
prime adolescents to interpret ambiguous social situations as hos-

![Figure 2. Model showing the unstandardized path coefficients for the adolescent sample (black) and the young adult sample (gray). Solid straight lines indicate significant relations ($p < .05$), dashed lines indicate marginally significant relations ($p < .10$), and dotted lines indicate that relations are not significant. *$p < .05$. **$p < .01$.](image)
tile, increasing feelings of rejection. In this way, developmental outcomes of media influences and peer rejection may be intertwined and enforce a downward spiral.

The present study tested the causal chain between peer rejection and preferences for antisocial media content. Therefore, we used an experiment with random sampling over the various conditions. However, the experimental setting may also be seen as a limitation, and our procedure might not be considered representative for peer rejection in daily life. It can be argued that peer rejection on a daily basis probably is even more hurtful. Thus, in real life, this may perhaps lead to even stronger effects. Moreover, we cannot draw any conclusions with regard to possible long-term effects in line with the GAM’s claims that repeated exposure to antisocial media content will lead to hostile knowledge structures. At best, we may suggest that stronger preferences for antisocial media content will instigate larger amounts of exposure to such content, which may lead to detrimental effects on adolescent development. However, longitudinal research is needed to establish the suggested downward spiral effects of peer rejection and antisocial media use during adolescence.

Another limitation of our study is that the measures of anger, moral judgment, and media preference were taken at the same time. Therefore, the present results are not inconclusive in terms of causality. However, as we tested various models, we may suggest a causal path because only the model with a double mediation in between peer rejection and antisocial media preferences was significant. Longitudinal and experimental research is needed to further test the causality of this effects chain.

In our study, peer rejection did not have a direct effect on antisocial media preferences, whereas the analyses suggest that peer rejection indirectly influences antisocial media preferences via anger and a more tolerable moral judgment. Thus, the results indicate that rejection-based anger and moral judgment are underlying mechanisms explaining preferences for antisocial media content in adolescents. Given the design of the current study, feelings of anger and frustration were directly related to being rejected by peers. Nevertheless, we cannot know from the present results whether feelings of anger evoked by other sources, or other emotions such as anxiety, may affect moral judgment and media preferences in a similar way. Future research should address these issues.

In all, our results supported a process model in which peer rejection in adolescence evokes intense feelings of anger and frustration, which instigates a tolerable moral judgment of antisocial, immoral, and risky behavior as portrayed in the media. Subsequently, a more tolerable moral judgment was closely tied to a preference for antisocial media content. These relationships did not apply to neutral/social media preferences in adolescents and could not be established for the young adult sample. This underpins our suggestion that especially peer-rejected adolescents might be at risk for negative media effects. Our results are important for scholars, parents, teachers, pediatricians, and others concerned with adolescent development, well-being, and health. They may benefit from our results by further studying and stimulating the development of appropriate emotion regulation strategies and thereby limiting proposed heightened exposure to antisocial media content.

Conclusions

Our study shows, for the first time, how peer rejection may lead to a preference for antisocial media content. Given the developmental stage of adolescence, and that this relation could not be established for young adults in our study, suggests that this phenomenon uniquely pertains to adolescence. The key mechanisms in this process are shown to be rejection-based anger and a tolerable moral judgment toward antisocial behavior as portrayed in the media. Therefore, peer-rejected youngsters seem more at risk for undesired media influences than their accepted counterparts.

References


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