Internet use and verbal aggression: The moderating role of parents and peers

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ABSTRACT

This research investigated the influence of parent–adolescent communication quality, as perceived by the adolescents, on the relationship between adolescents' Internet use and verbal aggression. Adolescents (N = 363, age range 10–16, M_{T1} = 12.84, SD = 1.93) were examined twice with a six-month delay. Controlling for social support in general terms, moderated regression analyses showed that Internet-related communication quality with parents determined whether Internet use is associated with an increase or a decrease in adolescents' verbal aggression scores over time. A three way interaction indicated that high Internet-related communication quality with peers can have disadvantageous effects if the communication quality with parents is low. Implications on resources and risk factors related to the effects of Internet use are discussed.

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1. Introduction

In recent years the Internet has become a significant part of many adolescents' lives (Rideout, Foehr, & Roberts, 2010). The increasing popularity of the Internet (due to more widespread broadband access and new applications such as Youtube and Facebook) has fuelled questions on its consequences by the general public and researchers alike. One field of inquiry is the role of parents and how they can contribute to more positive and less negative consequences of adolescent Internet use. The present research is focused on adolescents' Internet-related communication quality with their parents and their peers. Based on a longitudinal design, we examine the influence of parent–adolescent and peer–adolescent communication quality (as perceived by the adolescents) on the relationship between the amount of Internet use and adolescents' verbal aggression.

1.1. Internet risks and opportunities

The Internet offers plenty of activities for adolescents such as different forms of online communication and online video game play. With respect to online communication, there are three characteristics that differ from face-to-face communication: Anonymity, asynchronicity, and accessibility (Valkenburg & Peter, 2011). Anonymity refers to a lack of audiovisual information such as nonverbal or paraverbal cues or the lack of any information regarding the (true) source of a comment or a chat message. Asynchronous communication is common on the Internet: Unlike face-to-face situations, many Internet applications provide time to reflect about one's communication. This is apparent for forum posts and e-mail, but even chat software includes a send button that allows for prior deliberation. Moreover, the Internet provides access to plenty of written and audiovisual content and to a large number of communication partners who may or may not have similar interests, social background, or age.

These features of Internet communication can provide opportunities for adolescent development, but they involve risks. On the positive side, anonymity, asynchronicity, and accessibility can lead to an enhanced control of self-presentation and self-disclosure, and can make a positive contribution to adolescents' development (Valkenburg, Peter, & Schouten, 2006). For example, adolescents can communicate without apprehension about their physical appearance, which is often discomforting and can play a role in the development and perpetuation of psychological disorders such as eating disorders (cf. Fox, Rumsey, & Morris, 2007; Slater & Tiggemann, 2010). With more time for deliberation, adolescents can fine-tune their self-related utterances, and the Internet supplies

ample opportunities to intensify pre-existing offline relationships (Reich, Subrahmanyam, & Espinoza, 2012) and to form friendships with others they might never have met or never have gotten closer to in the offline world.

On the other hand, anonymity, asynchronicity, and accessibility implicate specific risks for a healthy adolescent development. The arguably most obvious danger is the easy access to sexual and/or violent content, such as pornography, violent movies, or violent video games (e.g., Baumgartner, Valkenburg, & Peter, 2010; Gentile, Saleem, & Anderson, 2007). Moreover, since the early days of the Internet, it has been feared that communication on the Internet might be more hostile and offensive than face-to-face communication (e.g., Kiesler, Siegel, & McGuire, 1984). Social Identity Deindividuation Theory posits that an individual's online communication is strongly influenced by salient group norms (Postmes & Spears, 1998; Reicher, Spears, & Postmes, 1995). Thus, depending on these norms, communication may or may not be vulgar, hostile, or offensive. The usage of aggressive language on the Internet is typically referred to as *flaming*, i.e., "expressing oneself more strongly on the computer than one would in other communication settings" (Kiesler et al., 1984, p. 1130). Several early studies suggest that flaming (e.g., "Go die in a hole") is particularly common on the Internet, as compared to face-to-face encounters (e.g., Orengo, Zornoza, Prieto, & Peiró, 2000; Sproull & Kiesler, 1986). A more recent study examined flaming on the popular video sharing website Youtube (Moor, Heuvelman, & Verleur, 2010). The authors investigated a random sample of videos and related comments and showed that in about one third of the cases, the first five postings included at least one flaming comment. Moreover, a majority of Youtube users stated they had often noticed flaming when reading comments on videos. In addition to flaming, which is often targeted at strangers, offensive language on the Internet can be directed at a known person like in cases of online harassment (Jones, Mitchell, & Finkelhor, 2013; Lwin, Li, & Ang, 2012) and cyberbullying (Kowalski, Limber, & Agatson, 2012; Tokunaga, 2010).

Much of the research on the effects of digital media on adolescents addressed the influence of audiovisual physical aggression in digital media, most notably in violent video games, on measures of physical aggression. Research has focused on this type of aggression because it is the most frequently depicted and modeled form of aggression in violent video games (Anderson et al., 2010). Meta-analyses summarizing the findings of cross-sectional, longitudinal, and experimental studies suggest that violent video game play is a causal predictor of physical aggression (Anderson, 2004; Anderson et al., 2010; Sherry, 2001).

Less is known about the influence of digital media use on verbal aggression which is characterized by a tendency to disagree and to get into arguments with others (Buss & Perry, 1992). Theory suggests that the exposure to strong language and verbal offenses on the Internet increases adolescents' verbal aggression (cf. Anderson & Bushman, 2002). For example, adolescents may acquire insulting phrases online and develop cognitive associations between incidents of potential disagreement and the usage of strong language (Huesmann, 1998; Linder & Gentile, 2009). In line with these predictions, verbal aggression exposure on TV predicted teacher ratings of verbal aggression among fifth grade girls in the US (Linder & Gentile, 2009). We are aware of only one study (Collins, Freeman, & Chamarro-Premuzic, 2012) that focused on verbal aggression as a correlate of Internet use, in that case of playing massively multiplayer online role playing games (MMORPGs). The results of a mixed adolescent and adult sample suggest that those who played MMORPGs and were identified as 'problematic players' scored higher on verbal aggression (the subscale of the questionnaire by Buss and Perry (1992)) than non- MMORPG players. To the best of our knowledge, no other study so far has highlighted the influence of Internet use on users' verbal aggression.

1.2. The role of parents (and peers)

One of the most pressing questions regarding the psychological effects of digital media use is what role parents can play to increase the opportunities and to minimize the risks associated with Internet use. In the field of media influence, parenting practices and related research has been labeled as *parental mediation* (those practices most often function as independent variables or moderator variables in the statistical sense, though). Research on parental mediation has focused on TV and on children for the most part. However, these lines of research appear to be relevant with respect to older samples and the Internet (Clark, 2011; Livingstone & Helsper, 2008). Two areas of parenting strategies have received particular attention: *Active mediation* or talking with adolescents about the Internet on the one hand and *restrictive mediation* or setting rules and regulations on the other.[1] Research on the TV use of adolescents suggests that active parenting yields more positive results than regulating and restricting adolescents' media use (Nathanson, 1999, 2002; Nathanson & Cantor, 2000). Research on parental mediation practices regarding adolescents' Internet use points in a similar direction. Restriction is often ineffective as Internet activities may take place outside the parents' control, and applications considered safe by parents (such as chatrooms for teenagers, Facebook, or Youtube) can contain improper content (Lee & Chae, 2007; Mesch, 2009; Shin & Huh, 2011). Several studies suggest that active mediation is more successful (Holtz & Appel, 2011; Lee & Chae, 2007). Parent–adolescent conversations can make adolescents aware of the potential opportunities and risks of the Internet. Moreover, it was suggested that adolescents who feel they can talk about the Internet with their parents have more resources available to cope with potential stressors than those who see conversations with their parents about the Internet to be worthless (Appel, Holtz, Stiglbauer, & Batinic, 2012). In line with this assumption, adolescents' reported quality of Internet-related parent–adolescent communication predicted less compulsive Internet use (Van den Eijnden, Spijkerman, Vermulst, van Rooij, & Engels, 2010). One cross-sectional study investigated the relationship between Internet use and loneliness and the moderating influence of parent–adolescent communication quality (Appel et al., 2012). In line with previous findings (see Huang, 2010, for an overview) amount of Internet use was unrelated to loneliness on average. The authors obtained a significant interaction with the communication quality variable: Internet use was related to more loneliness among adolescents with low Internet-related communication quality whereas no such effect was found among adolescents with high communication quality. This moderation effect was observed even if family support in general terms was controlled for.

Despite the importance of peers in adolescents' life, little research is available on the role that peers might have with respect to the choice and effects of media. Qualitative research suggests that adolescents indeed talk about media frequently with their peers (Suess et al., 1998). One cross-sectional study on the role of parents and peers examined TV use and adolescents' aggression (Nathanson, 2001). This study indicated that adolescent–peer communication about violent content contributed to an acceptance of the violent content which in turn yielded an increase of unwanted effects on aggression scores. Thus, just as conversations about media with parents were found to decrease negative media effects, conversations about media with peers increased negative effects. We are aware of no research that investigated the role of peer–adolescent communication in the field of Internet use.

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[1] Research about parenting with respect to TV use identified a third strategy, co-viewing (e.g., Nathanson, 2002). As Internet use is typically a more private activity than watching TV, results from TV may not be readily applicable to Internet use.