Predicting Dysfunctional Internet Use: 
The Role of Age, Conscientiousness, and Internet Literacy in Internet Addiction and Cyberbullying

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ABSTRACT

Internet addiction (IA) and cyberbullying (CB) represent two examples of dysfunctional Internet use (DIU) which are accompanied by negative consequences. In terms of prevention, the training of technical and reflective skills (Internet literacy) will be discussed with regard to these patterns. This study investigates the role of age, conscientiousness, and Internet literacy on IA symptoms and the participation in CB. Analyses reveal that positive attitudes towards online production and interaction and lower self-regulative skills can be associated with severe IA symptoms. Cyberbullies display less skills in reflecting on Internet content and also prove to have less self-regulative skills. Younger and less conscientious individuals are more likely to use the Internet dysfunctionally. Furthermore, significant correlations between experiences as a cyberbully and IA symptoms were found. In conclusion, the authors suggest that current media/Internet literacy curricula should be complemented by teaching reflective and regulative skills to prevent Internet users from negative consequences.

KEYWORDS

Age, Conscientiousness, Cyberbullying, Internet Addiction, Internet Literacy, Pathological Internet Use

INTRODUCTION

Over the past decades, the Internet has grown to be a powerful medium, regularly used by 3.4 billion people (Internet World Stats, 2015), e.g., for purposes of communication, information seeking, and recreation. Certain applications for interpersonal communication, e.g., instant messenger and social network sites, are very popular and frequently used amongst the younger population (van den Eijnden, Meerkerk, Vermulst, Spijkerman, & Engels, 2008). According to Castiglione (2008), the Internet becomes a source of self-medication for younger users, especially to develop their identities or to establish relationships. Even if the Internet is used as a beneficial tool, an abnormal use could be entailed with negative consequences for oneself and others over the long term (Guan & Subrahmanyam, 2009; Livingstone, 2008). Past research indicated a high number of possible risks associated with dysfunctional Internet use (DIU), including intended and unintended experiences e.g., in pornographic or hateful online content, problematic harmful contacts via grooming or harassment as well as privacy risks (Mitchell, Finkelhor, & Wolak, 2003; Ybarra & Mitchell, 2008). In the following section, we briefly discuss the phenomena of Internet addiction (IA) and cyberbullying (CB) as two serious
problems for adolescents as well as university students (Kowalski, Giumetti, Schroeder, & Lattanner, 2014; Kowalski, Limber, & Agatston, 2012; Pontzer, 2009; Rumpf, Meyer, Kreuzer, & John, 2011; Siomos, Dafouli, Braimiotis, Mouzas, & Angelopoulos, 2008; Slonje & Smith, 2008).

Dysfunctional Internet Use: Internet Addiction and Cyberbullying - Predisposing Factors and Commonalities

Since the late 90's, scientists pay attention to IA, as one pattern of DIU (Spada, 2014; Young, 1998b, 1999). IA is generally described as “an individual’s inability to control his or her Internet use, which might lead to the development (and maintenance) of addictive symptomatology, functional impairment, and, in some users, comorbidity” (Lopez-Fernandez, 2015, p. 263). Although there is still disagreement about its classification, the clinical significance of the phenomenon cannot be denied. Diagnostic criteria for IA are based on the traditional diagnostic criteria of substance-related addictions, which are withdrawal, development of tolerance, preoccupation, loss of control, psychosocial problems due to continuation of the behavior, jeopardizing important relationships, and using the Internet to escape from negative moods (e.g., Brand, Young, & Laier, 2014; Young, 1999). The specific subtype, the Internet Gaming Disorder, has recently been added as a research diagnosis in the appendix of the latest DSM-5 (American Psychiatric Association, 2013). It was found that younger individuals are the most vulnerable subjects to use the Internet excessively, with reported prevalence rates from 6 to 35% (Kuss, Griffiths, Karila, & Billieux, 2014; Spada, 2014).

The second pattern, CB, is defined as “an aggressive, intentional act carried out by a group or individual, using electronic forms of contact repeatedly, and over time against a victim who cannot easily defend him or herself” (Smith et al., 2008, p.376). CB can happen time- and place-independently and contains a power imbalance between bully and victim (e.g., social status, technical skills; Dilmac, 2009; Slonje & Smith, 2008). The cyberbully’s anonymity and distance to the victim might have a disinhibiting effect and the victim’s emotional and psychological reactions cannot be observed directly (Ybarra, 2004). The act of a cyberbully could be additionally differentiated in active and passive (secondary) CB (Bhat, Chang, & Linscott, 2010). While in active CB the bully has the intention to directly hurt another person by publishing insulting material, the passive cyberbully spreads already shared offending content, writes further nasty comments, or clicks the like-button under an insulting post. In fact, both forms can lead to devastating consequences for the victim (e.g., Ortega, Elipe, Mora-Merchán, Calmaestra, & Vega, 2009). Prevalence rates range between approximately 10 and 40%, depending on the definition of CB and other criteria like cultural background and assessment methods (Kowalski, Giumetti, Schroeder, & Lattanner, 2014).

Although dysfunctional Internet behaviors mostly have been studied separately, previous empirical research gave insight into possible overlapping and similar predictors of different DIU patterns. Few studies have given insight into IA and CB and indicate some related influencing factors and commonalities. Next to the factor of age, past research repeatedly found that the profound personal characteristic conscientiousness, summarizing the level of being organized, diligent, and scrupulous (Ross et al., 2009), is negatively related to the amount of time people spent online (e.g., Buchanan, Johnson, & Goldberg, 2005; Landers & Lounsbury, 2006), tendencies towards IA (e.g., Charlton & Danforth, 2010), the (excessive) use of social networking sites (e.g., Amichai-Hamburger & Vinitzky, 2010), as well as CB (Del Barrio, Aluja, & García, 2004). Furthermore, IA and CB share psychopathological symptomatology like depressive symptoms and aggressive behaviors among those involved (Gámez-Guadix, Orue, Smith, & Calvete, 2013; Ko, Yen, Liu, Huang, & Yen, 2009; Morrison & Gore, 2010). Studying the associations between IA and CB behaviors, Jung et al. (2014) found out that CB perpetrators indicate higher tendencies towards symptoms of an IA as well as rule-breaking
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