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Cyber-aggression in adolescence and internet parenting styles: A study with victims, perpetrators and victim-perpetrators

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ABSTRACT

Cyber-aggression is the new form of interpersonal violence among adolescents. This study examines the prevalence of cyber-aggression and its differentiation in terms of adolescents' sociodemographic characteristics and digital practices, as well as parenting styles experienced by four groups: non-violent, victim, perpetrator and victim-perpetrator Finally, we add an in-depth view of the predictors of becoming double involved. A sample of 627 adolescents (12- to 16-years-old) from schools in northern Portugal and the Azores answered two questionnaires. The results show that 63.1% reported being involved in cyber-aggression, with 31.1% admitting to being victim-perpetrators. Adolescent girls and younger adolescents, both girls and boys, characterized the non-violent and victims' groups, whereas the perpetrators and victim-perpetrators groups were characterized by adolescent boys and older adolescents, both boys and girls. A higher frequency of information and communication technology use and cyber-practices/risks were associated with victim-perpetrators. Further, individuals in the non-violent group were more likely to perceive their parents' parenting styles as authoritative and authoritarian and victim-perpetrators as permissive and laissez-faire. Additionally, laissez-faire parenting affects adolescents' cyber-involvement. This relationship is, however, mediated by the frequency of adolescents' cyber-practices/risks. Calling without justification, sending exaggerated messages of affection, sending insulting messages and sending pornographic images or messages were the most prevalent behaviours among the victim-perpetrators. Victimization-perpetration increased when adolescents published personal information, consulted erotic websites or arranged offline meetings with someone whom they had met online only. Theoretical and practical implications are discussed.

1. Introduction

Today's adolescents are being educated within a cyber-culture, becoming the most active users of information and communication technologies (ICTs) at the inter(national) level (Abajaoude, Savage, Starcevic, & Salame, 2015; Almeida, Alves, Delicado, & Carvalho, 2011; Bilic, 2013; Jones, Mitchell, & Finkelhor, 2013; Pereira & Matos, 2016). Consistent with this trend, data collected from the Organisation for Economic Co-operation and Development through the Programme for International Student Assessment (OECD, 2017), representing 28 million 15-year-olds in 72 countries, revealed that 95% of adolescents have daily access to the internet at home from their smartphones (91%), laptops (74%), desktop computers (60%) or tablets (53%). The report conducted by the EU Kids Online network showed similar patterns in Europe, with Portugal having one of Europe's highest average age of first internet access: 10 years old (Livingstone, Haddon, Görzig, & Ólafsson, 2011; N = 25,142, 9–16-years-old). Almost all Portuguese

children, up to the age of 15, had internet access at home (96%) and 94% of them surfed via mobile-broadband (Statistical National Institute [SNI], 2016). Up to 50% gained online access with their laptops, 35% used smartphones and 31% used tablets (Simões, Ponte, Ferreira, Doretto, & Azevedo, 2014; N = 3500, 9–16-years-old), with higher rates among boys and older adolescents (Livingstone et al., 2011). Social-networking and school work represent the top of one-quarter of adolescents' to-do lists (Matos et al., 2014; N = 6026, 11–15-years-old), taking up between 140 and 190 min of the day on a typical weekday or day of the weekend (OECD, 2017).

ICTs' diffusion and access have multiple benefits and meet different needs of youth development by allowing adolescents to identify/differentiate, develop critical thinking, refine socio-emotional skills, test social roles, experience different romantic relationships and self-explore specific interests (i.e., sexuality; Borca, Bina, Keller, Gilbert, & Begotti, 2015; Lenhart, Smith, & Anderson, 2015; Pereira & Matos, 2016; Pettalia, Levin, & Dickinson, 2013; Subrahmanyam, Greenfield, &

Tynes, 2004). Notwithstanding these opportunities, there is also evidence suggesting that increased online exposure maximizes youth vulnerability to potential risks, such as becoming an internet addict, viewing racist/hate or sexual/violent content, contacting paedophiles, meeting with dangerous people, and encountering commercial manipulation (Byrne, Katz, Lee, Linz, & McIlrath, 2014; Leung & Lee, 2011; Livingstone et al., 2011; Mesh, 2009; Ozgür, 2016; Rosen, Cheever, & Carrier, 2008). Exposure to these new risks tends to increase the possibility of adolescents becoming victims and/or perpetrators of aggression in offline (APAV, 2016; Hazelwood & Koon-Magnin, 2013; Pereira, Sptizberg, & Matos, 2016) and online worlds (i.e., cyber-aggression; Aricak et al., 2008; Bilic, 2013; Livingstone et al., 2011; Jones et al., 2013; Matos et al., 2014; Mishna, Khoury-Kassabri, Gadalla, & Daciuk, 2012; Pereira & Matos, 2015; Rice et al., 2015; Ybarra & Mitchell, 2004). The psychological challenges of youth (i.e., developmental, cognitive and social immaturity, deficiency in social information processing and difficulty in estimating the potential moral repercussions of actions), as well the nature of the cyber environment itself, with its anonymity, de-individuation, disinhibition, lack of social cues and asynchronous modality (Abajaoude et al., 2015; Bilic, 2013; Borca et al., 2015; Calvete, Orue, Estévez, Villardón, & Padilla, 2010; Crick & Dodge, 1996; Law & Fung, 2013; Pettalia et al., 2013; Subrahmanyam et al., 2004), reinforce the pertinence of scientific research focused on cyber-aggression among adolescents (Pereira et al., 2016; Pereira & Matos, 2016).

1.1. Cyber-aggression among adolescents

Cyber-aggression has been defined as any repeated behaviour that involves intentional and unwanted ICT-mediated interpersonal violence, with the aim of tormenting, offending, harassing and/or threatening the target (Abajaoude et al., 2015; Bilic, 2013; Jones et al., 2013; Pereira et al., 2016; Pereira & Matos, 2015; Ybarra & Mitchell, 2004). Some of these cyber-tactics comprise typical routine acts that are apparently harmless (e.g., posting on Facebook), while others are characterized by higher levels of intrusiveness (e.g., sending threatening and coercive messages; Pereira & Matos, 2016). Cyber-aggression can be perpetrated directly (e.g., insulting, monitoring, sexually harassing) or indirectly (e.g., rumour-spreading, name-calling, gossiping, encouraging isolation; Bilic, 2013; Jones et al., 2013; Pereira & Matos, 2016). It is not easy to operationalize the spectrum of cyber-aggression given this heterogeneity of behaviours. Many of these behaviours overlap or are indistinct epiphenomena, such as cyber-harassment (e.g., Jones et al., 2013), cyber-bullying (e.g., Abajaoude et al., 2015), cyber-dating abuse (e.g., Zweig, Dank, Yahner, & Lachman, 2013), cyber-stalking (e.g., Ferreira, Martins, & Abrunhosa, 2011), sexting (e.g., Livingstone et al., 2011) and cyber-trolling (e.g., Wright, 2017).

In fact, the definition of the phenomenon motivated some controversy within the scientific community. Therefore, in our study, the definition of cyber-aggression includes factors differentiating it from other phenomena (such as harassment, aggression, defamation, humiliation or stalking), namely, the fact that it takes place between peers, there is an imbalance of power between them, and the main purpose is to cause suffering, humiliation and discomfort (Pereira & Matos, 2016).

Another issue that has been problematized in most of the cyber-aggression definitions is the self-perceived impact on adolescents. Previous studies have reported that cyber-aggression is not necessarily experienced as damaging or upsetting (Livingstone et al., 2011), while others have found that involvement in cyber-aggression can cause significant physical, emotional, educational and social consequences (Abajaoude et al., 2015; Bilic, 2013; Guo, 2016; Jones et al., 2013; Larrañaga, Yubero, Ovejero, & Navarro, 2016; Pereira et al., 2016; Pereira & Matos, 2016; Rice et al., 2015; Ybarra & Mitchell, 2004).

Regardless of the way it is operationally defined, several international and national surveys have revealed an exponential increase in the number of adolescents involved in cyber-aggression (either as victims,

perpetrators or victim-perpetrators). A systematic review of the peer-reviewed literature, performed by Selkie, Fales, and Moreno (2016) and including 81 manuscripts (from 2003 to 2015), reported prevalence rates of cyber-bullying victimization from 3% to 72%, rates of perpetration from 1% to 41% and rates of victimization-perpetration from 2.3% to 16.7%. The Youth Internet Safety Surveys (YISS), using a sample representative of the American population aged 10 to 17, showed an increase in cyber-harassment from 6% in 2000 to 9% in 2005 and 11% in 2010 (Jones et al., 2013; $N = 4561$). The U.S. YISS revealed prevalence rates of 4% for victims, 12% for perpetrators and 3% for victim-perpetrators of cyber-harassment behaviours ($N = 1501$, 10–17, Ybarra & Mitchell, 2004). Estimates from the Pew Research Centre's Teen Relationship Study revealed that one-quarter of the 1060 adolescents between 13- and 17-years-old were targets of uncomfortable flirting cyber-tactics, where some of the perpetrated behaviours were potentially controlling of/harmful to intimate partners/former partners (e.g., accessed mobile or online accounts; modified/deleted social media profiles; sent embarrassing pictures; downloaded GPS or tracking programs; Lenhart et al., 2015). Between 2010 and 2014, there was an increase in the proportion of Europeans between 9- and 16-years-old who encountered one or more of several online risks (from 48% to 52%), have been bothered by something on the internet (from 13% to 17%), saw/received sexual images/messages (from 15% to 17%) and experienced some type of cyber-bullying (from 7% to 12%) (Livingstone et al., 2011; Simões et al., 2014).

However, although there are many studies published in this area, especially regarding the prevalence of this phenomenon in adolescents and young adults, the methodological quality has been inconsistent with respect to the diversity of definitions used, the application of instruments not validated and/or with reduced internal validity, and the use of convenience samples. Analyses with these quality concerns could produce prevalence estimates that are biased, difficult to generalize and often challenging to interpret (Selkie et al., 2016).

Although the self-reporting tools could under- or overestimate the prevalence of the phenomenon (since they depend on the participants' perceptions of the behaviours and memory processes that could result in biased results), and despite the fact that scientific knowledge about adolescents' involvement in these behaviours in Portugal is still limited and/or at an embryonic stage, (Pereira et al., 2016; Pereira, Matos, & Sampaio, 2015), studies have been trying to address some of these methodological limitations through the use of representative samples. Recent studies have found prevalence rates of 5% for victims of cyber-bullying and 2% for cyber-bullies (Matos et al., 2014). Other investigations revealed that 61.9% of adolescents were victims of cyber-stalking (Pereira & Matos, 2016; $N = 627$; 12–16) and 60.8% of cyber-harassment, in general (Pereira et al., 2016; $N = 627$; 12–16). Novo, Pereira, and Matos (2014) found that 31.1% of Portuguese adolescents were cyber-harassers and 18.2% were specifically cyber-stalkers. Victim and perpetrator roles overlapped with 93.3% of those adolescents. Even though cyber-aggression has become a frequent target of scientific and social interest, information about which factors may moderate an adolescent's involvement in the different cyber-aggression roles (i.e., as victim, perpetrator or victim-perpetrator) is lacking.

The present research is pertinent to both international and national contexts, as it provides a global and integrative understanding of cyber-aggression among the youth population with a representative sample. First, it analyses the prevalence of cyber-victimization, cyber-perpetration and double involvement. Second, it adds an in-depth and contextualized view of potential individual and familial factors (i.e., sociodemographic characteristics, digital practices and internet parenting styles) that may influence an adolescent's involvement in the different roles identified. Further, by analysing how internet parenting could constitute a predictor of cyber-aggression involvement, this study will add to the limited international scientific research base on this topic. Finally, it also provides novel and important insight into understanding the double involvement phenomenon. The results regarding the