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Adolescents' experience of offline and online risks: Separate and joint propensities

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ABSTRACT

Adolescence is a period of increased risk experience and ever more often these occur online. The current study aims to investigate whether adolescents' online and offline risk experiences are driven by the same general propensity to risks. Data from a representative study of $N = 19{,}406$ (50% girls) internet-using 11–16 year olds ($M = 13.54$, $SD = 1.68$) youth in Europe were subjected to the current analyses. Three confirmatory factor analyses were applied to measures of offline and online risk experiences (five each). A bi-factor model of a general risk factor and two specific factors of online and offline risks was shown to provide the best theoretical and empirical fit. All risk experiences loaded significantly on the general risk factor while additionally all offline risks loaded significantly on the offline risk factor. However, none of the online risks loaded significantly on the online risk factor. Online risks could not be explained by factors that go beyond a general propensity to experience risks suggesting that new technologies do not bring with them a new type of risk propensity driven by that environment. Interventions should target risk and protective factors that can account for adolescents' experiences across risk types (online and offline).

1. Introduction

There is ample evidence that adolescence is a period of increased risk behaviour (Burke et al., 1997; Van Nieuwenhuijzen et al., 2009). Moreover, research suggests that those engaging in one type of risk behaviour often additionally do so in others, i.e. engage in multiple risks (Guilamo-Ramos, Litardo, & Jaccard, 2005; Jessor, 2013). Already Rutter (1987) argued that it is not an individual risk factor but the number of risk factors children experience that lead to psychopathology. In a similar vein, Schoon (2006) put forward that experiencing isolated risk factors in childhood may help to build resilience; however, it is the combined effect of risk factors that will show adverse effects on developmental outcomes. Coherent with this theorizing empirical validity of methodological approaches using cumulative risk indices has been demonstrated (Deater-Deckard, Dodge, Bates, & Pettit, 1998; Stoddard et al., 2013; Williams, Anderson, McGee, & Silva, 1990). This argumentation is in line with the notion that independent of the specific type of risk behaviour this might be driven by a general underlying risk factor or propensity for displaying risky behaviours (Donovan & Jessor, 1985; Jessor, 1991, 2013).

The current generation of adolescents are making ever more use of the internet. Consequently, adolescents risk behaviour also occurs online. Children's online risk experiences have received growing attention in recent years by researchers (e.g., Cyberbullying Research Center; The Pew Internet & American Life Project; Youth Internet Safety Survey etc.), policy makers and stakeholders (e.g., Childnet; EC Safer Internet Programme; Internet Watch Foundation). This is not surprising as consequences of online risk experiences can reach as far as severe mental health difficulties and in some instances suicide (Kowalski & Limber, 2013). However, it is not known whether the concept of a general underlying risk factor or propensity for displaying risky behaviours also applies to online risk experiences and whether such a factor would display a joint or separate risk propensity to that of offline risk experiences.

The focus on propensity to risk recognises the influence of personality and behavioural factors which apply across domains, including across the offline/online boundary. In relation to adolescence, one explanation put forward is that teenagers combine sensation-seeking with a relative lack in impulse control (Peach & Gaultney, 2013; Steinberg et al., 2008; Van

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Nieuwenhuijzen et al., 2009). Recent empirical evidence suggests that, similar to offline risk experiences, online risk experiences do often co-occur and are associated with similar characteristics (Hasebrink, Görzig, Haddon, Kalmus, & Livingstone, 2011). The hypothesis that those who encounter offline risks are more likely to encounter online risks, whether because of their personality or behaviour, is supported by survey evidence (Palfrey, Sacco, Boyd, & DeBonis, 2008; Wolak, Finkelhor, & Mitchell, 2008), clinical reports (Delmonico & Griffin, 2008; Mitchell & Wells, 2007), policy analysis (Byron, 2008) and criminal cases (Child Exploitation and Online Protection Centre, 2010). Further examples include the findings that involvement in traditional bullying predicts cyberbullying (Görzig, 2011; Kowalski, Morgan, & Limber, 2012), that those who engage in more risky offline (and risky online) activities are more likely to be involved in sexting (Livingstone & Görzig, 2014) or that online and offline sex offenders show similar characteristics and tactics (Wolak & Finkelhor, 2013). Furthermore, adolescents' risk experiences do not appear to have risen with the onset of new technologies, that is, over the period when internet and mobile use have risen sharply, long term measures of harm to children reveal little or no increase over recent years (Madge & Barker, 2007; Maughan, Collishaw, Meltzer, & Goodman, 2008), and some reductions in bullying and victimization (Finkelhor, 2013; Livingstone & Smith, 2014).

Despite this research evidence there have been many alarmist accounts of elevated risks for adolescents due to the onset of new media often aggravated by the coverage in the media. Considerable research efforts are underway to progress beyond the moral panic (Critcher, 2008) associated with young people's use of new media such as the internet so as to identify appropriate policy responses. This is urgent insofar children and young people are adopting digital communication technologies rapidly, often far ahead of the adults charged with their safety and wellbeing. Yet, it is not clear whether the experience of (multiple) risks online can be traced back to the same common underlying risk factor shared with the experience of (multiple) risks offline and how much (if any) of adolescents' risk experience can be explained by the specific environment (offline vs. online). If a common factor were identified it could account for both online and offline risks and so aid the development of prevention strategies for online risks (Hale & Viner, 2012; Hale, Fitzgerald-Yau, & Viner, 2014; Jackson, Henderson, Frank, & Haw, 2012).

1.1. Research questions

Given the lack in the knowledgebase concerning a common factor underlying various kinds of adolescents' risk experiences whether online or offline and its timely importance the current paper aims to investigate possible joint and separate propensities to experience risks online and offline. Firstly, it is examined whether adolescents' online and offline risk experiences are driven by a propensity to experience risks within each type of environment separately and secondly, whether any risk experience (offline *and* online) is driven by the same general propensity to experience risks and what (if any) the role of the specific environment (offline *or* online) plays. In particular, it is investigated whether 1a) adolescents' offline risk experiences are related to one underlying offline risk factor and 1b) adolescents' online risk experiences are related to one underlying online risk factor, 2) adolescents' risk experiences (online and offline) are related to one underlying risk factor without any notable contribution of the specific environment (i.e., online or offline) or 3) adolescents' risk experiences are related to two separate underlying components: one related to the propensity to experience risks in general and one related to the specific environment of the risk experience (i.e., online or offline).

2. Methods

2.1. Study design and sample

Data were obtained from the cross-national survey data of the EU Kids Online II project (Livingstone, Haddon, Görzig, & Ólafsson, 2011). A random stratified sample of approximately 1000 internet-using youths aged 9–16 and one of their parents were interviewed at home during 2010 in each of twenty-five European countries,[1] yielding a total sample size of 25,142 youths. Interviews were conducted face-to-face for questions about internet access and use, with private completion for sensitive questions, including those on the experience of online and offline risks. Questions about all risk experiences included in the questionnaire were posed only to 11–16 year olds, with a core sample size of 19,406[2] (50% girls/boys) The London School of Economics' Research Ethics Committee approved the methodology and appropriate protocols were put in place to ensure that the rights and wellbeing of children and families were protected during the research process (for full details, see Livingstone et al., 2011 and Görzig, 2012).

2.2. Measures

The EU Kids Online survey was designed in consultation with international experts and stakeholders. As a result ten specific risk experiences (five online and five offline) were included.

Offline risk experiences

Adolescents were asked whether they had engaged in any of five offline risk behaviours in the previous 12 months (adapted from the Health Behaviour in School-aged Children (HBSC) survey; Currie et al., 2008): "Had so much alcohol that I got really drunk" (8.2%), "Missed school lessons without my parents knowing" (12.6%), "Had sexual intercourse" (5.5%), "Been in trouble with my teachers for bad behaviour" (15.4%), "Been in trouble with the police" (2.9%).

Online risk experiences

Children were asked whether they had experienced any of five online risks in the previous 12 months (for the exact and detailed phrasing, see Livingstone, Haddon, & Görzig, 2012; Livingstone et al., 2011): Seen sexual images online (16.6%), sent sexual messages online (2.9%), bullied others online (3.2%), made a new contact online (33.5%), seen negative user generated content (i.e., hate messages that attack certain groups or individuals, content promoting bulimia/anorexia, self-harm or drug use; 21.4%).

2.3. Data analysis

The ten risk experiences were used for the present analyses. A reflective model using structural equation modelling seemed appropriate given that the direction of theoretically assumed causality was from each risk factor to the respective risk experiences (Jarvis, Cheryl, MacKenzie, & Podsakoff, 2003). Confirmatory factor analysis (CFA) was applied to test three potential factor structures as warranted by the research questions: 1) a non-hierarchical correlated *two-factor* model including online and offline risk

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[2] Country and individual level weights in line with reports of the EU Kids Online survey data (Görzig, 2012; Livingstone et al., 2011) have been applied. The unweighted sample size was N = 18,709. Percentages are reported from weighted data analyses.