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Risky behavior via social media: The role of reasoned and social reactive pathways

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ABSTRACT

Objectives: It is important to understand what factors make some users of social media engage in risky activities. This under-researched area is the focus of the present study which applies the dual-process Prototype Willingness Model to demonstrate the potential role of reasoned and social reactive pathways in explaining risk behaviors in adolescents and adults in the online environment.
Design: Quantitative single time point study using online survey data from an international sample of social media users ($N = 1220$).
Methods: Two-step logistic regression analysis tested the predictive ability of the reactive pathway variables of the Prototype Willingness Model above and beyond reasoned pathway variables from expectancy-value models such as the Theory of Reasoned Action and Theory of Planned Behavior.
Results: The reactive pathway variables increased explained variance in willingness to engage in online risk behaviors (compared to reasoned pathway variables alone) by a mean improvement of 6.2% across both adolescent and adult age groups. Prototype favorability (how positively or negatively an individual judges their perception of the 'typical person' to engage in a risk behavior) emerged as a particularly strong predictor of willingness to engage in online risky behavior. The predictive ability of prototype similarity (an individuals perceived similarity to the 'typical person' to engage in risk behavior) differed according to the type of risk behavior involved, with similarity on conscientiousness and extraversion appearing to have the most influence upon willingness.
Conclusions: Reactive pathways significantly predict willingness to engage in risky behavior online across both age groups. The reactive pathway variables explained more additional variance in willingness for adolescents compared to adults suggesting that reactive processes may play a bigger part in adolescents' online risk taking; with decision making potentially shifting towards a more reasoned, analytical pathway in adulthood.

1. Introduction

Social media sites such as Facebook, Twitter, and YouTube offer opportunities for users to interact and share information not only with their friends and family but also with people who have similar interests. Over recent years the number of people using such sites has increased dramatically (Perrin, 2015) and people of all ages are permanently logged onto social media through their cell phones and mobile tablets (Peters & Allouch, 2005). However, alongside the benefits such as improved socialization and communication and enhanced learning opportunities, social media use can also pose specific risks such as cyberbullying, sexting, sending embarrassing photos, publicly sharing location, and the spread of dangerous pranks and games like the 'Choking Game' (Ahern, Sauer, & Thacker, 2015; Branley & Covey, 2017; GASP, 2013; Garner & O'Sullivan, 2010; O'Keeffe & Clarke-Pearson, 2011; Tsai, Kelley, Cranor, & Sadeh, 2010).

It is important to understand which factors may influence some users to engage in these types of risky social media practices. People might not be aware of the risks involved or they might underplay the risks associated with social media use. They might also be subject to social pressure and be influenced by whether the activity is commonplace amongst their peers. However, little is

known about the role of these or other types of social cognitive factors. To fill this gap the present research adopted a dual-process framework of the type set out in the Prototype Willingness Model (PWM: Gerrard, Gibbons, Houlihan, Stock, & Pomery, 2008; Gibbons, Gerrard, Blanton, & Russell, 1998) to predict willingness to engage in four different types of risky online activities: sharing embarrassing photos, publicly sharing one's current location, engaging in and sharing the videos of risky pranks and stunts, and engaging in sexual communication with strangers. These four behaviors were chosen as we wished to investigate risk taking behavior which reflects behaviors at the heart of social media: sharing, (i.e., location sharing, photo sharing) and online communication; and these risk behaviors have previously been linked to social media usage (Brake, 2014).

The reasoned pathway antecedents proposed in models like the Theory of Reasoned Action (TRA: Fishbein & Ajzen, 1975), Theory of Planned Behavior (TPB: Ajzen, 1991) and Fishbein's (2008) integrative model of behavioral prediction (IM) have been widely successful in predicting positive health behaviors. However they have not been as successfully applied to the prediction of negative or risky behaviors. It has been suggested that this may be due to the models being focused purely upon a reasoned, intentional pathway to risk. The PWM incorporates two different pathways to behavior: a reasoned pathway to account for risk behaviors that are planned and determined by *intentions*, and a social reactive pathway to account for unplanned or non-intentional variations in people's *willingness* to engage in risk behavior.

Dual-process models, like the PWM, are based on the assumption that there are two types of decision making involved in health behavior. The first type of decision making is analytical and based upon the idea that behavior is planned and intentional. The PWM conceptualizes this as a reasoned action pathway similar to that described in models such as the TRA (Fishbein & Ajzen, 1975), TPB (Ajzen, 1991) and the IM (Fishbein, 2008). Antecedents of this reasoned pathway which have been shown to account for a considerable proportion of the variance in a range of health behaviors include people's *attitudes* towards the behavior (e.g., whether the individual perceives the behavior as positive or negative) and their perceptions of the social pressures to perform or not perform a behavior − which as outlined in the IM can be a function of both *injunctive norms* (perceptions of whether the behavior is approved or disapproved by others) and *descriptive norms* (whether others are engaging in the behavior). Reasoned pathway models suggest that if an individual holds positive attitudes towards a behavior, feels that others approve the behavior and/or has peers that engage in the behavior − they will be more likely to engage in that behavior themselves.

The second type of decision making is heuristic based and based upon the idea that risk behavior may not always be volitional but influenced by a more emotional reactive response to a given situation. The PWM conceptualizes this as a social reactive pathway whereby people can be willing to engage in a behavior without necessarily having a plan to engage in that behavior. It suggests that willingness is determined by people's images or prototypes they have about the type of person who engages in that activity (e.g., the 'typical' smoker, drinker, or social media user who does dangerous pranks). If people view the prototypical person in a positive light (*prototype favourability*), they will be more willing to engage in the behavior, particularly if they perceive themselves to also be similar to that individual (*prototype similarity*). Gibbons, Gerrard, Reimer, and Pomery (2006) emphasize that individuals are aware that by engaging in the behavior they will also gain some of the negative characteristics that they attribute with the prototype and therefore these prototypes should not be regarded as aims or 'goals' (which is in contrast to intention which generally represents 'goal states';

Ajzen, 1991). Instead, willingness is based upon an individual's overall *heuristic* evaluation of the prototype and their social situation.

Given adolescents' sensitivities about their image, the PWM has generally been applied to explaining why young people engage in a range of health-risk activities such as smoking (Gerrard, Gibbons, Stock, Lune, & Cleveland, 2005; Hukkelberg & Dykstra, 2009), alcohol consumption (Blanton, Gibbons, Gerrard, Conger, & Smith, 1997; Davies, Martin, & Foxcroft, 2013; Rivis et al., 2006; Spijkerman, van den Eijnden, Vitale, & Engels, 2004; Zimmermann & Sieverding, 2010), and unsafe sex (Myklestad & Rise, 2007). A couple of recently published studies have also demonstrated the models contribution towards explaining two specific types of online risk behavior in adolescents: sexting (Walrave et al., 2015) and self-disclosure about peer relationships (Van Gool, Van Ouytsel, Ponnet, & Walrave, 2015). However, risk behaviors are not restricted to adolescents, many adults also engage in risky behavior; although it is possible that there may be differences in the type of risk behavior and/or the factors underlying that behavior. For example, it has been suggested that age differences in risk behaviors may be more prevalent for risks involving emotive, reactive responses but for risks which are part of a 'cold', more reasoned process there may not be any differences in prevalence between adolescents and adults (Figner & Weber, 2011) As adult social media users are also putting themselves at risk online (e.g., more than 30% of adult users have been found to have at least one application that is sharing their location online to others; Brake, 2014) it is important not to limit our analysis to young people. This study therefore explores the antecedents of willingness to engage in online risky behavior in both adult (20 years and over) and adolescent (19 years and under) social media users.

In this study we were particularly interested in testing the extent to which antecedents unique to the social reactive pathway (i.e., prototype favorability and prototype similarity) could enhance the prediction of willingness to engage in the four types of risky activities on social media above and beyond reasoned pathway antecedents (i.e., attitudes, injunctive norms, descriptive norms, and previous behavior). Social media users were presented with four hypothetical scenarios to exploring their perceptions, attitudes and willingness to engage in the risk behavior. Of course, the degree of enhancement that the social reactive pathway components provides could vary according to the type of risky activity being predicted. The original premise of the model is that the PWM has particular value in explaining high risk impulsive behaviors − which applies to a lesser or greater extent across the four activities. For example, sharing ones location or embarrassing photos on social media might be considered less risky than engaging with sexual communications with a stranger or engaging in and sharing videos of risky pranks and stunts. Comparison between age groups also enabled us to examine the extent that reactive-based decision processes may be exclusive to adolescents or whether they appear to continue into adulthood.

2. Method

2.1. Sample and survey methodology

A single time point online survey provided data from a diverse sample of 1102 international social media users from 77 countries; with the majority of participants from the UK, Ireland, USA and Canada (refer to Appendix A for complete demographics). Participants were aged between 13 and 80 years ($M = 28.5$ years, $SD = 11.3$ years); 69.7% were female and 30.3% were male. The bias towards female participants appears to be representative of social