Modeling the contribution of personality, social identity and social norms to problematic Facebook use in adolescents

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HIGHLIGHTS

- We investigated the role of personality and social influence processes in adolescent problematic Facebook use.
- Personality and norms were found to predict problematic Facebook use.
- Gender, group norms and social identity were found to predict frequency of Facebook use.

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ABSTRACT

Facebook is the most popular social networking site in the world providing the opportunity to maintain and/or establish relationships, to share media contents and experiences with friends, and to easily communicate with them. Despite the resources and the innovative social features offered by Facebook research has emerged indicating that its use may become problematic, with negative consequences on personal psycho-social well-being, especially among adolescents and young adults. The main aim of this study was to examine the unique contribution of personality traits and social influence processes (i.e. subjective norms, group norms, and social identity) to perceived frequency of Facebook Use and Problematic Facebook Use in a sample of adolescents. A total of 968 Italian adolescents participated in the study. Structural equation modeling showed that emotional stability, extraversion, conscientiousness and norms directly predicted Problematic Facebook Use, whereas gender, group norms and social identity predicted perceived frequency of Facebook use. In conclusion, both personal and social variables appear to explain perceived frequency of Facebook use and Problematic Facebook Use among adolescents, and should be taken into account by researchers and educational practitioners.

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1. Introduction

Over the last decade Social Networking Sites (SNSs) use has become increasingly important in the way people interact with other people and social groups. Facebook, which holds about 1.5 billion active users, with at least 900 million of these logged into the site every day, is the most popular SNS in the world (Ryan, Chester, Reece, & Xenos, 2014). Facebook has many functions, including providing the opportunity to maintain and/or establish relationships, to share media contents and experiences with friends, and to easily communicate with them.

Despite the resources and the innovative social features offered by Facebook (Lee, Cheung, & Thadani, 2012), research indicates its use may become problematic, with negative consequences on personal psycho-social well-being, especially among adolescents and young adults

(Kuss & Griffiths, 2011). Problematic Facebook Use (henceforth PFU) has been found to be related to depression symptomology (Pantic, Damjanovic, Todorovic, et al., 2012), anxiety (Rosen, Whaling, Rab, Carrier, & Cheever, 2013), and decreased self-esteem (Satici & Uysal, 2015) leading to the suggestion that the use, over-use, or misuse of Facebook may manifest as a new potential mental health problem (Kuss & Griffiths, 2011). Moreover, Kuss and colleagues (2011) indicated that PFU appears to fall in the "cyber-relationship addiction" category proposed by Young (1999) to differentiate diverse types of Internet addiction/problematic Internet use. Even though the latter has not yet been recognized as a mental disorder in the fifth edition of DSM (for a review on this topic, see Kuss, Griffiths, Karila, & Billieux, 2014), and despite the fact that there is still a lack of consensus about terminology and definition of both Internet addiction and Facebook addiction (Moreau, Laconi, Delfour, & Chabrol, 2015), several researchers agree in highlighting that Internet use, and especially SNSs use, could be problematic for some users (Kuss & Griffiths, 2011; Satici & Uysal, 2015).

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For the purposes of this study, we adapted Caplan's (2010) measure of Generalized Problematic Internet Use to the Facebook context (Ryan et al., 2014). This measure has been recognized as a viable option for measuring PFU (Lee et al., 2012; Ryan et al., 2014) because it defines some features of problematic Internet use that apply readily also to PFU, including: (1) preference for online interactions; (2) motivation to use the Internet for mood regulation; (3) deficient self-regulation in terms of obsessive thought patterns involving Internet use (i.e. cognitive preoccupation) and compulsive negative use; and (4) negative consequences for daily social life that may occur.

Recent research has highlighted the possible contribution of personality and social influence processes to PFU (Kuss & Griffiths, 2011; Lee et al., 2012). However, to date, no study has investigated the relative contribution of these constructs in predicting PFU among adolescents. We focused on adolescence because it has been recently argued that Facebook is heavily used by adolescents to shape their relationships with peers and to outline personal characteristics, such as personality and identity, which develop in this particular period of life (Doornwaard, Moreno, van den Eijnden, Vanwesenbeeck, & ter Bogt, 2014).

1.1. Personality as a predictor of Facebook use

The Five-Factor Model (Caprara, Barbaranelli, Borgogni, & Perugini, 1993; Caprara, Barbaranelli, & Livi, 1994) traces individual personality differences based on five main dimensions: Extraversion (which refers to expansiveness and energy), Agreeableness (which refers to concern and politeness), Conscientiousness (which refers to orderliness and precision), Emotional Stability (which refers to the capacity to cope with anxiety and emotionality), and Openness (which refers to openness to novelty and interest toward different people and cultures). Previous studies have found personality characteristics to be linked to online experiences by influencing, for example, the frequency of Internet use and interpersonal communication (e.g., Butt & Phillips, 2008; Ross et al., 2009). Research has also shown that introverts can cope with their off-line social difficulties using online communications (Amichai-Hamburger, Wainapel, & Fox, 2002) and that extraversion is a significant predictor of frequent Internet use to engage in social activities. In addition, neuroticism has been observed to play a role in affecting the sharing of information in social networks (Ross et al., 2009). Moreover, openness to experience has been associated with a greater tendency to be sociable on Facebook, and agreeableness and conscientiousness appear to be linked to the number of friends on SNSs (Ross et al., 2009).

1.2. Application of the social influence theory to Facebook use

Social Influence Theory proposes that individual cognition and behavior can be affected by three social processes: compliance (normative influence of others' expectations), internalization (congruence of one's goals with those of other group members), and identification (i.e. conception of one's self in terms of the group's defining features) (Kelman, 1974). These processes may be operationalized as subjective norms, group norms, and social identity (see Aim of the current study section). Because SNSs are social in nature, Social Influence theory has been recently adopted by several researchers (e.g., Dholakia, Bagozzi, & Pearo, 2004; Zhou, 2011) to examine the role of social influence processes in predicting participation intention and, in turn, actual behavior in virtual communities. It has indeed been found that intention to participate in social network activities predicted actual online behaviors and higher levels of virtual community engagement (Zhou, 2011). For example, participation intention may be particularly influenced by subjective norms (i.e., compliance), in that, one should be more prone to participate in online activities if such activities are valued and expected by other in-group members. Similarly, a process of internalization of group norms (e.g., what significant others think about online activities or how they behave online) may influence an individual intention to

participate in the same online activities and subsequent consistent behavior. Therefore, because social influence processes tend to be particularly strong during adolescence (Brechwald & Prinstein, 2011; Prinstein & Dodge, 2008), adolescents' behaviors in online communities can be especially influenced by their peers' attitudes and beliefs about online activities and their actual behavior online; that is adolescents' decision to do something in online contexts can be regulated after significant references' pressure, expectations and behaviors (Doornwaard et al., 2014).

1.3. Aim of the current study

This study reports the derivation of a model designed to assess the contribution of personality, social identity and social norms to perceived frequency of Facebook use (henceforth PFFU) and PFU among adolescents. The model is presented on Fig. 1 and the following are hypotheses derived from the literature sustaining the module structure.

H1: PFFU and PFU will be positively associated with openness and agreeableness and negatively associated with emotional stability, extraversion, and conscientiousness.

H2: PFFU and PFU will be positively associated with the endorsement of subjective norms around such usage.

Subjective norms refer to what particular behavior is considered appropriate and, to some extent, prescribed within a group ("what ought to be"; e.g., Cialdini, Kallgren, & Reno, 1991). In other terms, they refer to the group "pressure" an individual feels about what he/she should do and his/her beliefs about what others expect him/her to do. Studies have shown that the norms such groups hold can influence both positive and negative attitudes and behavior, including during adolescence (e.g., Borsari & Carey, 2003; Pozzoli & Gini, 2013). In this context subjective norms refer to the influence of important others' mindsets on the need for Facebook use. Adolescents who endorse subjective norms that favour Facebook use, that is, who perceive that significant people think that they should use Facebook will be more likely to engage with it.

H3. PFFU and PFU will be positively associated with the endorsement of group norms around such usage.

While subjective norms refer to what group members expect other individuals in the group to do, group norms in general refer to the congruence of group's goal to one's goal (Zhou, 2011). In particular, in SNSs context they reflect, for example, the agreement among group members about the importance (for themselves) of using Facebook. Therefore, adolescents who endorse group norms favorable to the use of Facebook and share positive values about Facebook with their group (i.e., the process of internalizing group norms; Kelman, 1974) will be more likely to engage with it.

H4. PFFU and PFU will be positively associated with the strength of social identity.

Social identity reflects one's definition of self in relation to his/her group. It includes three dimensions: cognitive social identity (the overlapping of self-image with the identity of friends' group), affective social identity (the feeling of belongingness toward friends' group), and evaluative social identity (the perceived value as a member of the friends' group). Social identity has been found a key factor in on-going perceptions and behaviors in general (Tajfel, 2010), in addictive behaviors (e.g. Buckingham, Frings, & Albery, 2013; Frings & Albery, 2015; Dingle, Dingle, Cruwys, & Frings, 2015), and in the whole Social Cure School (e.g. Jetten, Haslam, & Alexander, 2012). Therefore, we propose that social identity should lead adolescents to use Facebook.

2. Method

2.1. Participants

A convenience sample of 968 adolescent students from two secondary schools in Italy voluntarily participated in the study. The participants