

Daria J. Kuss is a doctoral researcher in the area of online addictions and Dr. Mark D. Griffiths is a Professor of Gambling Studies. They are both at the International Gaming Research Unit, Psychology Division, Nottingham Trent University, Burton Street, Nottingham, NG1 4BU. For communication please email: daria.kuss@ntu.ac.uk : mark.griffiths@ntu.ac.uk

Daria J. Kuss and Mark D. Griffiths

Excessive online social networking: Can adolescents become addicted to Facebook?

Recent press reports have claimed that the excessive use of online social networking sites (SNSs) may be potentially addictive. The mass appeal of social networks on the Internet could potentially be a cause for concern, especially considering the increasing amounts of time young people spend online. On the Internet, young people can engage in a variety of activities some of which may have the potential to be addictive. From a psychological perspective, it may be plausible to speak of 'Facebook Addiction Disorder' (or more generally 'Social Networking Site Addiction Disorder') because addiction criteria, such as neglect of personal life, mental preoccupation, escapism, mood modifying experiences, tolerance and concealing the addictive behavior, appear to be present in some people who use SNSs excessively (Young, 2009). As a consequence of the increased media attention to headlines about 'Facebook addiction', we recently reviewed all the scientific evidence on the topic (Kuss & Griffiths, 2011a). This article briefly summarises what we found.

Usage of social networking sites

With the emergence of SNSs such as Facebook, SNS usage has become a global consumer phenomenon. Today, more than 500 million users are active participants in the Facebook community alone and studies suggest that between 55% and 82% of teenagers and young adults use SNSs on a

regular basis (Kuss & Griffiths, 2011a). In reviewing SNS usage patterns, the findings of both consumer research and empirical research indicate that overall, regular SNS use has increased substantially over the last few years. This supports the availability hypothesis that where there is increased access and opportunity to engage in an activity (in this case SNSs), there is an increase in the numbers of people who engage in the activity (Griffiths, 2003).

Usage of SNSs has also been found to differ with regards to age group. For instance, a study comparing 50 teenagers (aged 13-19 years) and the same number of older MySpace users (aged over 60 years) revealed that teenagers' friends' networks were larger and that their friends were more similar to themselves with regards to age (Pfeil, Arjan & Zaphiris, 2009). Furthermore, older users' networks were smaller and more dispersed age-wise. Additionally, teenagers made more use of MySpace web 2.0 features (i.e., sharing video and music, and blogging) relative to older people.

Research (mainly conducted on teenagers and students) has also shown that females use SNS in order to communicate with members of their peer group, whereas males use them for the purposes of social compensation, learning, and social identity gratifications (Barker, 2009). Furthermore, males tend to disclose more personal information on SNS sites relative to females (Jelicic, Bobek, Phelps, et al, 2007; Fogel & Nehmad, 2009). Usage patterns also appear

to differ between genders as a function of personality. Unlike females with neurotic traits, males with neurotic traits have been found to be more frequent SNS users (Correa, Hinsley & de Zuniga, 2010). In addition to this, males appear more likely to be addicted to SNS games (such as Farmville) relative to females (Zhou, 2010). This is in line with the finding that males in general are a population at risk for developing an addiction to playing online games (Kuss & Griffiths, 2011b). As yet, there are no reliable figures for how prevalent SNS addiction is among the general population or specific populations such as adolescents as no nationally representative surveys have been carried out.

Negative consequences of social networking site usage

Some studies have highlighted a number of potential negative consequences of excessive SNS usage. It appears that the nature of the feedback from peers that is received on a person's SNS profile determines the effects of SNS usage on wellbeing and self-esteem. For instance, Dutch adolescents aged 10 to 19 years who received predominantly negative feedback had low self-esteem, which in turn led to low wellbeing (Valkenburg, Peter & Schouten, 2006). According to a more recent study assessing the relationships between Facebook usage and academic performance, Facebook users had lower grades and spent less time studying than students who did not use this SNS (Kirschner & Karpinski, 2010). Of the 26% reporting an impact of their usage on their lives, three-quarters (74%) claimed that it had a negative impact, including procrastination, distraction, and poor time-management.

A potential explanation for this may be that students who used the Internet to study may have been distracted by simultaneous engagement in SNSs, implying that this form of multitasking is detrimental to

academic achievement (Kirschner & Karpinski, 2010). However, we concluded in our review that due to the lack of longitudinal designs used in the published studies to date, no causal inferences can be drawn with regards to whether the excessive use of SNSs is the causal factor for the reported negative consequences (Kuss & Griffiths, 2011a).

Addiction to social networking sites

It has been claimed that those people addicted to using SNSs experience symptoms similar to those experienced by those who suffer from addictions to substances or other behaviours (Echeburua & de Corral, 2010). Furthermore, it has been hypothesized that young vulnerable people with narcissistic tendencies are particularly prone to engaging with SNSs in an addictive way (La Barbera, La Paglia & Valsavoia, 2009). However, to date, only three empirical studies have been conducted and published in peer-reviewed journals that have specifically assessed some aspect of the addictive potential of social networking.

In the first study (Pelling & White, 2010), 233 teenage students (64% females) were surveyed. High-level usage was defined as using SNSs at least four times per day. Addictive tendencies with regards to SNS use were significantly predicted by self-identity and belongingness. Therefore, those who identified themselves as SNS users and those who looked for a sense of belongingness on SNSs appeared to be at risk for developing an addiction to SNSs.

A second study (Wilson, Fornasier & White, 2010) of 201 teenage students (76% female) indicated that those with high extraversion and low conscientiousness scores predicted both addictive tendencies and the time spent using an SNS. The researchers suggested that the relationship between extraversion and addictive tendencies could be explained by the fact that using SNSs satisfies the extraverts' need

to socialize. The findings with regards to lack of conscientiousness appear to be in line with previous research on the frequency of general Internet use in that people who score low on conscientiousness tend to use the Internet more frequently than those who score high on this personality trait (Kuss & Griffiths, 2011a).

A third study (Karaiskos, Tzavellas, Balta & Paparrigopoulos, 2010) reported the case of a young adult female who used SNSs to such an extent that her behaviour significantly interfered with her life. She used Facebook excessively for at least five hours a day and was dismissed from her job because she continuously checked her SNS instead of working. In addition to excessive use that led to significant impairment in a variety of areas in the woman's life, she developed anxiety symptoms as well as insomnia. This testifies to the potential clinical relevance of SNS addiction.

Such extreme cases have led to some researchers to conceptualize SNS addiction as Internet spectrum addiction disorder (Karaiskos, et al, 2010). This indicates that first, SNS addiction can be classified within the larger framework of Internet addictions, and second, that it is a specific Internet addiction, alongside other addictive Internet applications such as Internet gaming addiction (Kuss & Griffiths, 2011b), Internet gambling addiction (Griffiths, 2010), and Internet sex addiction (Kuss & Griffiths, 2011c).

When viewed from a critical perspective, these empirical studies suffer from a variety of limitations. The mere assessment of addiction tendencies does not necessarily demarcate real addictive pathology. In addition, the samples were small, specific, and skewed with regards to female gender. Clearly, it needs to be ensured that rather than assessing excessive use, addiction specifically needs to be assessed.

Conclusions

Overall, the engagement by adolescents

and students in particular activities on SNSs, such as social searching, and some personality traits have been found to be associated with greater SNS usage. This may serve as an anchor point for future studies in terms of defining populations who are at risk for developing addiction to using social networks on the Internet (such as adolescents). Furthermore, we recommend that researchers assess factors that are specific to SNS addiction, including the pragmatics, attraction, communication and expectations of SNS use because these may predict the etiology of SNS addiction as based on the addiction specificity etiology framework (Sussman, Leventhal, Bluthenthal, et al, 2011).

Due to the apparent scarcity of research on SNS addiction, further empirical research is clearly necessary. Investigating the relationship of potential addiction with narcissism may be a particularly fruitful area for empirical research. In addition to this, motivations for usage as well as a wider variety of negative correlates related to excessive SNS use need to be addressed. Furthermore, clear-cut and validated addiction criteria for SNS addiction are needed. Overall, the research (to date) indicates that social networking by adolescents is a highly popular and prevalent activity but only a very small minority appears to suffer problems as a result of SNS usage.

References

- Barker, V. (2009). Older adolescents' motivations for social network site use: The influence of gender, group identity, and collective self-esteem. *CyberPsychology & Behavior*, 12, 209-213.
- Correa, T., Hinsley, A.W., & de Zuniga, H.G. (2010). Who interacts on the Web?: The intersection of users' personality and social media use. *Computers in Human Behavior* 2010, 26, 247-253.
- Echeburua, E. & de Corral, P. (2010). Addiction to new technologies and to online social networking in young people: A new challenge. *Adicciones*, 22, 91-95.

- Fogel, J. & Nehmad, E., (2009). Internet social network communities: Risk taking, trust, and privacy concerns. *Computers in Human Behavior*, 25, 153-160.
- Griffiths, M.D. (2003). Internet gambling: Issues, concerns, and recommendations. *CyberPsychology & Behavior*, 6, 557-568.
- Griffiths, M.D. (2010). Gambling addiction on the Internet. In K. Young & C. Nabuco de Abreu (Eds.), *Internet Addiction: A Handbook for Evaluation and Treatment*. pp. 91-111. New York: Wiley.
- Jelicic, H., Bobek, D.L., Phelps, E., Lerner, R.M., & Lerner, J.V. (2007). Using positive youth development to predict contribution and risk behaviors in early adolescence: Findings from the first two waves of the 4-H Study of Positive Youth Development. *International Journal of Behavioral Development*, 31, 263-273.
- Karaiskos, D., Tzavellas, E., Balta, G., & Paparrigopoulos, T. (2010). Social network addiction: A new clinical disorder? *European Psychiatry*, 25, 855.
- Kirschner, P.A.; Karpinski, A. C., Facebook and academic performance. *Computers in Human Behavior* 2010, 26, 1237-1245.
- Kuss, D.J. & Griffiths, M.D. (2011a). Addiction to social networks on the internet: A literature review of empirical research. *International Journal of Environment and Public Health*, 8, 3528-3552.
- Kuss, D.J. & Griffiths, M.D. (2011b). Internet gaming addiction: A systematic review of empirical research. *International Journal of Mental Health and Addiction*, DOI 10.1007/s11469-011-9318-5.
- Kuss, D.J. & Griffiths, M.D. (2011c). Internet sex addiction: A review of empirical research. *Addiction Research and Theory*, DOI: 10.3109/16066359.2011.588351
- La Barbera, D., La Paglia, F. & Valsavoia, R. (2009). Social Network and Addiction. *Cyberpsychology & Behavior*, 12, 628-629.
- Pelling, E.L. & White, K.M. (2009). The theory of planned behavior applied to young people's use of social networking web sites. *CyberPsychology & Behavior*, 12, 755-759.
- Pfeil, U., Arjan, R. & Zaphiris, P. (2009). Age differences in online social networking - A study of user profiles and the social capital divide among teenagers and older users in MySpace. *Computers in Human Behavior*, 25, 643-654.
- Sussman, S., Leventhal, A., Bluthenthal, R.N., Freimuth, M., & Forster, M. (2011). Ames, S.L. (2011). A framework for specificity of the addictions. *International Journal of Environment Research and Public Health*, 8, 3399-3415.
- Valkenburg, P.M., Peter, J., & Schouten, A.P. (2006). Friend networking sites and their relationship to adolescents' well-being and social self-esteem. *CyberPsychology & Behavior*, 9, 584-590.
- Wilson, K., Fornasier, S. & White, K.M., (2010). Psychological predictors of young adults' use of social networking sites. *Cyberpsychology, Behavior and Social Networking*, 13, 173-177.
- Young, K. *Facebook Addiction Disorder?* Located at: http://www.netaddiction.com/index.php?option=com_blog&view=comments&pid=5&Itemid=0
- Zhou, S.X. (2010). *Gratifications, loneliness, leisure boredom and self-esteem as predictors of SNS-game addiction and usage pattern among Chinese college students*. In Chinese University of Hong Kong: Hong Kong. Located at: http://www.com.cuhk.edu.hk/courses/pgp_nm/projects/2010/Selina%20Zhou_Final.pdf

SHEU

The specialist provider of reliable local survey data for schools and colleges and recognised nationally since 1977.

"I really appreciate the professional service which SHEU offers. We have had a great experience working with Angela on the school surveys." Health Improvement Specialist

"The survey reports have been used to inform commissioning at specific commissioning groups. They are also being used within our Extended Schools Clusters and to inform The Annual Public Health and the Joint Strategic Needs Assessment."

Programme Manager - Young People

For more details please visit www.sheu.org.uk