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Association between Facebook addiction, self-esteem and life satisfaction: A cross-sectional study

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ABSTRACT

In recent years, many research efforts have been focused on investigation of potential connection between social networking and mental health issues. Particularly important and controversial remains the association between Facebook use, self-esteem and life satisfaction. In our cross-sectional study, on a sample of 381 Facebook users, we tested the existence and strength of this relationship using Bergen Facebook Addiction Scale (BFAS), Facebook Intensity Scale (FBI), Rosenberg's Self-Esteem Scale (SES), and Satisfaction With Life Scale (SWLS). With k-means cluster analysis, we divided the sample into 3 groups: ordinary, intensive, and addicted Facebook users. The results of our study show that ordinary Facebook users differ statistically in self-esteem and life satisfaction from both addicted and intensive users. Facebook addiction was in relation with lower self-esteem. Facebook addiction was also negatively related to life satisfaction. These results are in accordance with the previously published findings of other authors in the fields of social networking psychology and psychiatry.

1. Introduction

Apart from Twitter, LinkedIn, and MySpace, Facebook is one of the most popular social networking sites. It was launched in 2004 and currently has approximately 800 million users, providing the opportunity to communicate and share information (Facebook, 2014). The increase in the number of users of social networking sites is a global phenomenon (Vasalou, Joinson, & Courvoisier, 2010). The subject of Facebook is often taken up by researchers studying network communities due to its wide range of users and technological possibilities that allow people to maintain relationships from the offline world as well as establish new ones in the online world. Being a kind of platform for the exchange of information and a medium that makes it possible to establish new relationships or maintain existing ones, Facebook has a huge impact on social life (Ellison, Steinfield, & Lampe, 2007). According to Gemius statistics, 75% of Internet users in Poland use Facebook (Gemius, 2014). Additionally, as SocialTimes states, this SNS has about 11 million active Polish users, which is the 11th highest result in the world.

With the increased number of Facebook users, the problems associated with excessive use and addiction have become more and more frequent. Griffiths, Kuss, and Demetrovics (2014) pointed out the urgent need for further examination of Facebook addiction, which is often related to Internet addiction. Facebook addiction (also Facebook intrusion) is defined as excessive involvement in Facebook activities and is a frequent cause of problems in everyday social functioning (Elphinston & Noller, 2011). It is also characterized by some of the features commonly observed in other addiction diseases, such as tolerance, withdrawal, relapse etc. (Andreassen, Torsheim, Brunborg, & Pallesen, 2012).

In recent years, there have been several studies on Internet and Facebook dependence. For example, neuroticism and extraversion were positively associated with Facebook addiction, while, on the other hand, conscientiousness was negatively correlated with it (Andreassen et al., 2012). Additionally, depression turned out to be in a significant positive relationship with Facebook addiction (Błachnio, Przepiórka, & Pantic, 2015). Also, people with a low level of perceived control scored higher on the Facebook Addiction Scale (De Cock et al., 2014). The potential relationship between certain personality traits and compulsive use of social networking sites is still unclear.

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1.1. Facebook addiction and self-esteem

According to numerous studies, there is a positive relationship between self-esteem and Internet addiction (Armstrong, Phillips, & Saling, 2000). Those users who hold a negative view of themselves show a maladaptive use of the Internet. **Self-esteem** and life satisfaction were found to be predictors of **Internet addiction** and together with loneliness they explained 38% of the total variance (Bozoglan, Demirer, & Sahin, 2013). The results obtained by De Cock et al. (2014) indicate that low level of self-esteem is related to Facebook addiction. A longitudinal study showed that self-esteem was a moderator in the relationship between Facebook usage intensity and bridging social capital (Steinfield, Ellison, & Lampe, 2008). Facebook had more beneficial effect for those with lower self-esteem by bridging social capital even better than for those with higher self-esteem. In their pioneering research on users' personality, Internet use, and the satisfaction of needs, Kraut et al. (2002) formulated certain tendencies. According to their hypothesis known in the literature as "social compensation," people with low self-esteem compensate their difficulties in social relations when using the Internet. The second hypothesis – known as "rich get richer" – assumes that persons with a high level of self-esteem also receive strong gratification on the Internet; they are active online and have a large number of friends, which means people who manage well in the real world will also manage well in the virtual world. Zywica and Danowski (2008) tested both hypotheses on a group of American students with reference to Facebook and distinguish two groups of users: the first group were extraverts, with high self-esteem and popular both in real life and online; the second group were introverts, with low self-esteem, seeking to make up for their lack of popularity in real life by being active on Facebook.

1.2. Facebook addiction and satisfaction with life

There are some inconsistent results regarding the impact of Facebook on life satisfaction. On the one hand, a great body of research shows that there is a positive relationship between life satisfaction and Facebook use. For instance, an Australian study showed that Facebook connectedness is related to lower depression and anxiety and to higher life satisfaction (Grieve, Indian, Witteveen, Anne Tolan, & Marrington, 2013). Similarly, a positive relationship between Facebook intensity and life satisfaction was found in a sample of 2603 college students across Texas (Valenzuela, Park, & Kee, 2009). One of the reasons might be that Facebook helps young people to enhance social capital. On the other hand, as Chan (2014) shows, there is a link between the intensity of Facebook use, personality, and life satisfaction. A high level of Facebook usage has negative effects on satisfaction with life both in extraverts and in neurotics when users replace social relationship with the online ones. In the study with experience sampling, 82 participants taking part in the experiment received text-messages five times per day for 14-days each with a link to an online survey. They assessed their life satisfaction both before and immediately after the 14-day experiment (Kross et al., 2013). The results showed that Facebook use had detrimental effects on life satisfaction.

The main objective of this research was to examine the relationship between Facebook intensity, Facebook addiction, self-esteem, and life satisfaction. On the basis of previous results, we posed the following hypotheses:

H1. Self-esteem is negatively related to Facebook intensity. Those with lower self-esteem use Facebook more intensively.

H2. Lower self-esteem is positively related to Facebook addiction.

H3. Higher Facebook intensity is positively related to Facebook addiction.

H4. Facebook addiction is negatively related to life satisfaction.

2. Methods

2.1. Participants and procedure

The participants were 381 Facebook users (62.8% were females). Their mean age was 20.73 years, $SD = 4.49$, with a range from 12 to 58 years. They were recruited through posting a link to the online survey on the Facebook 'wall.' The survey was available for two weeks in April 2014 in Poland. The only condition one had to meet to take part in the study was having a Facebook account. The participants received no remuneration. In the instruction they were informed that the study concerned Facebook activity and that their contributions were anonymous. We used Polish versions of all the methods.

2.2. Instruments

The online survey comprised a series of basic demographic questions (e.g., age, gender, occupation, location) as well as some measures of Facebook addiction, self-esteem, and life satisfaction. We used two methods connected with extensive Facebook usage, the first one measuring only the intensity of use, and the second one measuring not only the intensity but also the consequences of this use. The methods used in the study have been widely applied in the subject literature, have good theoretical background, and showed good reliability in previous studies.

For measuring the intensity and frequency of Facebook usage, we used the *Facebook Intensity Scale* (FBI) (Ellison et al., 2007) with 8 items (e.g., *Facebook is part of my everyday activity*). As regards internal consistency, in the present study the scale had a Cronbach's α of 0.82. The scale measures the number of Facebook "friends," the amount of time spent on Facebook, and engagement in Facebook.

For measuring Facebook addiction, we used *the Bergen Facebook Addiction Scale* (BFAS) (Andreassen et al., 2012). The scale has 18 items, 3 items per each symptom of addiction, the symptoms being: salience, mood modification, tolerance, withdrawal, conflict, and relapse (Andreassen et al., 2012). The last version of the measure has 6 items, one per each symptom. We chose the items with loadings ranged from 0.80 to 0.84. The Cronbach's α reliability of the scale was 0.92. The range of the Facebook Addiction Scale was from 1 to 5. A higher score indicates a more severe level of Facebook addiction.

To measure self-esteem, we used *Rosenberg's Self-Esteem Scale* (SES) as adapted into Polish by Łaguna, Lachowicz-Tabaczek, and Dzwonkowska (2007). The Rosenberg Self-Esteem Scale contains 10 items with a four-point Likert scale and provides an overall evaluation of a person's self-esteem (e.g., *I feel that I have a number of good qualities*). The reliability of the scale (Cronbach's α) was 0.83.

Life satisfaction was measured with the *Satisfaction With Life Scale* (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985), consisting of 5 items designed to measure global cognitive judgments of satisfaction with one's life (e.g., *The conditions of my life are excellent*). The reliability of the scale (Cronbach's α) was 0.81.

3. Results

Table 1 shows the descriptive statistics and correlations between variables: Facebook intensity, Facebook addiction, self-esteem, and satisfaction with life. No gender differences were