Research report

Excessive use of Twitter among college students in the UK: Validation of the Microblog Excessive Use Scale and relationship to social interaction and loneliness

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ABSTRACT

Microblogging on sites like Twitter is a growing and popular trend among young people. Apparently, some users of these microblogs exhibit addiction-like symptoms. Until recently, there was no psychometric scale to measure the excessive use of Twitter. The development of the Microblog Excessive Use Scale (MEUS) in 2014 proved a positive step in assessing this phenomenon. In the current study, we employed the MEUS to assess excessive use of Twitter in a sample of 256 college students (53.1% female; mean age 21.4 years) in the UK. Confirmatory factor analysis (CFA), calculation of criterion-related and concurrent validity and reliability were performed to assess the scale's psychometric properties. The MEUS was found to be a valid instrument for assessing excessive use of Twitter among UK college students. In addition, we found that real life social interaction was negatively associated with excessive use of Twitter and this relationship was mediated by loneliness. We compared our results with results from a previous study in which the MEUS was developed and noted some interesting differences, which might be explained by cultural differences between samples in the two studies.

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1. Introduction

The internet, though regarded as an essential component of modern life, has also raised serious questions regarding its use. One of the many questions concerns problematic internet use (PIU), a generic term used to encompass such terms as internet addiction, internet overuse, internet use that interferes with offline socializations and other concepts that may arise from (over) use of the internet (Moreno, Jelenchick, & Christakis, 2013). Young people, dubbed 'the digital generation' are more prone to problems associated with PIU. In the latest version of the Diagnostic and Statistical Manual (DSM-5), PIU in form of internet addiction has been proposed as a "disorder in need for further study" (American Psychiatric Association, 2015).

People use the internet for various reasons, such as, gambling, searching for information, communicating with other people, watching videos, listening to music, playing games and shopping. All these uses can culminate into different addictive behaviours, which may generally be referred to as internet addiction (Christakis & Moreno, 2009). Symptoms of addictive internet use include compulsive use of the internet, difficulty in managing time spent on the internet, irritation when disturbed while online, poor social interaction with people not in the virtual world, excessive amount of time spent on the internet and intense preoccupation with internet use (Iskender, Akin 2010; Kraut et al., 1998).

To measure people's use of the internet and classify it as either addictive or not, different psychometric scales have been

developed, one of which is the Compulsive Internet Use Scale (CIUS, Meerkerk, van Den Eijnden, Vermulst, Garretsen, 2009). Another widely utilized scale used to assess internet addiction is the Internet Addiction Test (IAT) suggested by Kimberly Young (1998a). Recently, questions regarding the applicability and generality of IAT have been raised. For instance, Israelashvili, Kim and Bukobza (2012) have queried the lack of emphasis on purpose of internet use in the scale. Kuss and Griffiths (2011a, b) have also pointed out the need for specificity in measuring different forms of internet addiction. As internet addiction takes different forms such as gambling addiction, addiction to playing video games, addiction to internet shopping and social networking addiction, there is growing need to develop scales that can either accommodate all these forms of addiction, or specifically focus on one or two forms (Adiele & Olatokun, 2014).

With the same reasoning, we (Hou et al., 2014) developed a psychometric scale to measure excessive microblogging. The new scale, Microblog Excessive Use Scale (MEUS), comprises 10 items. Exploratory factor analysis of the scale revealed three factors, namely, 'health and withdraw problems', 'time management and performance' and 'social comfort'. The study found 'social comfort' to be the differentiating factor between Internet addiction and excessive microblogging. The study also revealed that excessive microblogging was not exactly the same as internet addiction. Young people's distinctive desire for self-presentation that drives them to microblogging on sites like Weibo is not represented in the IAT. Further, unlike internet addicts, excessive microbloggers in the study did not show significant reduction in real life social interaction. Thus, microblogging was thought to improve social interaction skills online, which may also be used offline.

The MEUS was developed and tested on Chinese population, through Chinese microblogging sites. This limited the study because of the cultural dynamics that exist across the world. Central to microblogging is the concept of self-presentation and culture is one of the major influences of self-presentation and image (Shweder & Bourne, 1984; Triandis, 1989). Studies have shown that Eastern cultures, like Chinese culture, are different from Western cultures with regard to self-presentation. A study by Chang (2013) showed that Asian participants had significant higher scores on inter-dependence self-construal and concern for social acceptance than Western participants. Owing to these cultural differences, it is important to assess the validity of the MEUS on other microblogging sites outside of China, hence the current study.

Twitter is one of the most popular microblogging sites in the world. According to Beevolve (2012), it has over 100 million active users; 50 million users log-in every day and it hosts approximately one billion tweets every 5 days. Further, 50% of Twitter users are in USA and 17% in the United Kingdom. Female users account for 53% and most users are under the age of 25 (73.9%). Microblogging on Twitter allows users to read and post short messages with a maximum of 140 characters. In spite of the growing number of users, only a few studies have assessed the excessive use of Twitter (Davenport, Bergman, Bergman, Fearrington. 2014; Kim, Namkoong, Ku, & Kim, 2008; Lee & Shin, 2004; Oh, 2003).

Twitter addiction, as a form of internet addiction, may be associated with some psychological factors that are also associated with internet addiction. Some of these factors are loneliness and social interaction skills (Kandell, 1998; Özdemir, Kusucu, & Ak, 2014; Whang, Lee, & Chang, 2003). In our previous study (Hou et al., 2014), we found that use of Weibo enhances real life social skills. Owing to cultural difference between our current sample of English students and the sample of Chinese students used in the previous study, we sought to assess the role of loneliness in mediating real life social interaction skills and Twitter use. We hypothesised that the cultural effect which may be observed from using the MEUS to assess excessive use of Twitter would also affect the relationship between Twitter use and social interaction/loneliness.

Further, previous studies have shown that diminished real life social skills is one of the causes of loneliness (Di Blasi et al., 2014; Engelberg & Sjoberg, 2004; Erwin, Turk, Heimberg, Fresco, & Hantula, 2004). Other studies have also shown that lonely people tend to prefer socializing on internet, which leads to overuse of social networking sites (Caplan, 2007; Durak-Batıgün, & Hasta, 2010; Esen & Siyez, 2011; Hamburger & Ben-Artzi, 2003; Morahan-Martina & Schumacherb, 2003). Thus, lonely people find the internet as a good source of relieving loneliness. For socially anxious people, the internet is a less risky avenue for self-presentation and dealing with real life social isolation (Morahan-Martina & Schumacherb, 2003). Further, according to Caplan (2007), social anxiety may be a confounding variable on the causative role of loneliness on preference and excessive use of computer mediated communication technologies. However, no study has investigated this mediating effect of loneliness on real life social interaction and excessive use of Twitter.

The current study has two objectives. The first objective is to determine whether the Microblog Excessive Use Scale (MEUS) can reliably be used to measure excessive use of Twitter among college students in UK. The second objective of the study is to assess the relationship among loneliness, social interaction and excessive use of Twitter. In pursuant of these objectives, the study constantly compares current findings (UK sample) with those found in our previous study in which the MEUS was developed (Chinese sample).

2. Methods

2.1. Participants

We collected data from 508 college students in UK. Those that had at least one missing item on MEUS scale were removed from the study. Further, those who missed more than 5% of the rest of the questionnaire or those that indicated that they had no Twitter account were also removed from the study. Because of low percentage of missing data, we replaced missing values with series mean. We had a final sample of 256 participants (136 females, 53.1%) with mean age of 21.4 years (SD = 2.67).

2.2. Ethics statement

All voluntary participants filled informed consent forms. As an incentive to participate in the study, 50 GBP Amazon cards were promised and given to 10 successful participants after a draw. The study was approved by the Human Research Ethics Committee of the University of Science and Technology of China (USTC).

2.3. Data collection

Data were collected online between June and July 2014. The study was publicised through different research centres in the UK and personal invitations. Most data were collected through University of East Anglia's Centre for Behavioural and Experimental Social Science (CBESS).

2.4. Measures

The following measures were used to achieve the objectives of the study:

2.4.1. Demographic data
Participants responded to demographic questions on age, gender, education level and ethnicity.