The Conceptualization and Assessment of Problematic Mobile Phone Use

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INTRODUCTION

Problematic mobile phone use (PMPU) is associated with potentially harmful and/or maladaptive behaviour that can occur in a number of different circumstances while using mobile phones (e.g., phoning while driving, phoning in situations in which it is socially inappropriate, losing control over mobile phone use in emotionally laden contexts). PMPU is usually considered as an individual's inability to control their use of mobile phones, and it eventually leads to negative consequences in their daily lives (e.g., financial problems, relationship problems, occupational and/or educational conflicts, sleep disturbances). PMPU is generally conceptualized within the framework of technological addictions (along with Internet-related addictions; for instance, see Griffiths, 1995; and Billieux, 2012).

The conceptualization of PMPU, as with other technological addictions, is controversial and has led to much debate. For example, Internet addiction (IA) has been conceptualized in many different ways (e.g., compulsive Internet use, Internet Use Disorder, problematic Internet use) and various distinct screening tools have been developed (King, Haagsma, Delfabbro, Gradisar, & Griffiths, 2013), leading to inconsistent findings regarding the prevalence rates and associated negative consequences (for reviews, see Kuss, 2012; Kuss, Griffiths, Karila, & Billieux, 2014). Following research into IA by many scholars (e.g., Griffiths, 2000; Starcevic, 2013), PMPU could likewise be considered a heterogeneous concept that has used different terms, of which PMPU is arguably the most common (Bianchi & Phillips, 2005; Billieux, Van Der Linden, D'Acremont, Ceschi, & Zermatten, 2007; Lopez-Fernandez, Honrubia-Serrano, Freixa-Blanxart, & Gibson, 2014). However, other researchers have used alternative terms, such as mobile phone addiction (Chóliz, 2010; Griffiths, 2013; Leung, 2008), mobile phone abuse (Fargues, Lusar, Jordania, & Sánchez, 2009; Pérez, Monje, & de León, 2012), mobile phone over-use (Jenaro, Flores, Gómez-Vela, González-Gil, & Caballo, 2007), mobile phone dependence (Toda et al., 2008), and nomophobia (Bragazzi & Puente, 2014).

In relation to the measurement of problematic mobile phone use, the problem of conceptualization has affected the validity of scales created to measure PMPU. The first scale to be developed was the *Cellular Phone Dependence Questionnaire* (CPDQ; Toda, Monden, Kubo, & Morimoto, 2004), quickly followed by the *Mobile Phone Problem Use Scale* (MPPUS: Bianchi &

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Phillips, 2005). More recently, other scales have been developed to take into account the evolving nature of mobile phones, such as the *Smartphone Addiction Proneness Scale* (SAPS: Kim, Lee, Lee, Nam, & Chung, 2014).

OVERVIEW

Since 2004, there has been a growing concern about PMPU that has led to a significant increase in research studies that have examined the phenomenon (Carbonell, Guardiola, Beranuy, & Bellés, 2009), as observed by the number of papers published and appearing in *Web of Science* (Thomson Reuters, 2014). Using the search parameters outlined in Table 1, a total of 87 papers were published (including literature reviews, survey studies, and clinical trials). The number of citations over the last few years (since 2009) has been exponential.

Empirical research of PMPU is in its infancy, and an increasing number of papers have been published since 2004. Therefore, in order to identify the pioneering scholars, a number of parameters were used. This initially included the publication of papers in scientific databases (operationalized as a minimum of two papers published concerning PMPU). Three complementary parameters were also used. Firstly, it includes those researchers who published the earliest papers (e.g., those that developed the first validated questionnaires, those that made the first scientific statements on the topic). Secondly, it includes those that provided relevant contributions to this field of knowledge (e.g., theoretical models, insightful reviews). Finally, it includes those that were published in high impact journals (such as Journal Citation Reports peer-reviewed journals with impact factors; e.g. *Computers in Human Behavior*, *Cyberpsychology, Behavior & Social Networking*). Using these criteria, the current leading scholars examining PMPU are divided geographically:

1. Dr. Jim G. Phillips (Bianchi & Phillps, 2005) at Auckland University of Technology (Australia), also with Dr. Sarah Butt and Dr. Alex Blaszczynski (Butt & Phillips, 2008; Phillips, Butt, & Blaszczynski, 2006) at the University of Sydney (Australia); Dr. Shari P. Walsh, Dr. Katherine Marie White and Dr. Ross McD. Young (Walsh, White, & Young, 2008; 2010) at Queensland University of Technology (Australia).
2. Dr. Joël Billieux (Billieux, 2012) at the Catholic University of Louvain (Belgium), who collaborates with Dr. Martial Van Der Linden (Billieux, Philippot, Schmid, Maurage, De Mol, & Van der Linden, 2014 ; Billieux et al. 2007; Billieux, Van der Linden, & Rochat, 2008) at the University of Geneva (Switzerland); Dr. Mark D. Griffiths (Griffiths, 2007; 2013) at Nottingham Trent University (United Kingdom), who collaborates with Dr. Xavier Carbonell (Beranuy, Oberst, Carbonell, & Chamarro,

Table 1. Search parameter specifications using web of science (WoS)

Search Parameters	Definitions
Terms used	**TOPIC:** ((“cell* phone*” or “mobile phone*” or “smartphone”)) *AND* **TOPIC:**((“addict*” or “problem*” or “pathol*” or “excessive*”)) *AND* **TOPIC:**((“test” or “scale” or “questionnaire” or “inventory”)) *NOT* **TOPIC:**(“electromagnetic*” or “radiation” or “exposure”)
Databases used	WoS, MEDLINE and SciELO [excluding (BCI)]
Databases	
Research areas used	**RESEARCH AREAS:** (PSYCHOLOGY OR BEHAVIORAL SCIENCES OR PSYCHIATRY OR SUBSTANCE ABUSE)

Note: This search was carried out in July 2014.