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COMMENTARY

Considering existing classic and contemporary proposals for preventing online addiction problems: Some old recipes for new problems

Commentary on: Problematic risk-taking involving emerging technologies: A stakeholder framework to minimize harms (Swanton et al., 2019)

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ABSTRACT

This commentary examines the proposed framework in relation to current policy options and preventive strategies and adds classical prevention and ecological models to tackle internet use-related addiction problems. Specifically, it highlights the preventive developments regarding contributions to promote the healthy use of technologies, and the need of designing and testing prevention strategies targeting the incidence, prevalence and severity of these problems at all population levels. In summary, to start preventing and minimising harms due to the problematic and addictive use of emerging technologies, we already have old models we can apply to these new problems to ensure secure behaviours through the technologies, and enhance users' wellness and quality of life.

KEYWORDS

internet addiction, internet use-related addiction problems, public health, policies, prevention, harm minimisation

The paper by Swanton, Blaszczynski, Forlini, Starcevic, and Gainsbury (2019) debates the relevance of introducing stakeholders in the prevention framework of those behavioural addiction problems that emerge and are developed by the use of technologies. The main contribution of their paper is a preliminary framework of seven groups (i.e. individuals, families, community, treatment and welfare providers, researchers, industry and governments) with a set of roles and responsibilities to minimise the harm associated with technological behavioural addictions. However, previous research has started to focus on policy frameworks to cover these behavioural addiction problems. Some of the existing public health developments, policy options and prevention strategies have emerged these years from literature reviews performed by authors from Eastern and Western cultures (Koh, 2017; Lopez-Fernandez & Kuss, 2019). The preventive outcomes show the level of maturity is starting to emerge in this field, after almost 25 years of intensive research. The present commentary aims to highlight the essential and timely contribution of the proposed framework by offering an update on the developments in place. It also reflects on how classical models may contribute to co-developing the pending guidelines for prevention, especially within the coronavirus disease pandemic, which has caused lockdowns worldwide and enhanced the need for prevention (Király et al., 2020).

From the public health perspective, generalised and specific internet problem-use preventive initiatives co-exist, which complete Swanton and colleagues (2020) proposal regarding the stakeholders' perspective. Several reviews have extracted a set of prevention

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strategies by identifying stakeholder groups. For instance, to prevent internet addiction, Vondráčková and Gabrhelik (2016) detected four groups to be trained about internet risks: children and adolescents, university students, parents and those close to the users (e.g. teachers) and employees. Similarly, Lee, Kim and Lee (2019) proposed the harm may be reduced by acting through the stakeholders involved in harmful content, maladaptive use and financial burden. The stakeholders are (by order of relevance) governments, industry, service and providers, research centres, schools, targeting parents and users.

Stakeholder groups have further been raised as being essential in tackling policy and prevention of these behavioural addictions: internet addiction (Lopez-Fernandez & Kuss, 2020; Vondráčková & Gabrhelik, 2016), video game addiction (King et al., 2017; Király et al., 2018), online sex addiction (Gola & Potenza, 2018; Putnam & Maheu, 2000) or social networking sites (SNSs) addiction (Brevers & Turel, 2019; Hussain & Griffiths, 2018). Indeed, more stakeholder groups than those described by Swanston and colleagues (2020) may be required to confront these public health concerns at all preventive levels. Contemporary literature on internet use-related addiction problems has covered some strategies for these groups and provided more detail on them:

1. Individuals – users (e.g. for those who are incognisant of and engage persistently with binge pornography minimising self-harm requires sexual health education: Gola, & Potenza, 2018; or strategies to self-control SNS uses: Brevers, & Turel, 2019).
2. Families, guardians, caregivers or significant others such a sibling, partner or friend (e.g. 'keeping an eye' on time spent online in-home and having conversations about online uses: Lopez-Fernandez & Kuss, 2020; or skills encouraging closer relationships and monitoring of online uses: Vondráčková & Gabrhelik, 2016).
3. Communities – physical and virtual communities (e.g. online gamers isolated at home but virtually connected with the 'guild' need information and education programs: Lopez-Fernandez & Kuss, 2020; companies can train employers in detecting the risk of developing internet addiction and propose to self-monitor themselves: Vondráčková & Gabrhelik, 2016).
4. Treatment and welfare providers (e.g. through funding for non-profit organisations and private enterprises, King et al., 2017; through clinicians in practice or hospitals who first have to tackle the problem: Király et al., 2018).
5. Researchers (e.g. more research is needed on co-occurring disorders associated with SNS uses: Hussain, & Griffiths, 2018; similarly, applied research on responsible internet use and prevention: Lopez-Fernandez & Kuss, 2020).
6. Industry – i.e. gaming companies (e.g. requesting prevention through gaming companies' corporate social responsibility measures: Király et al., 2018; and through industry-driven marketing factors: Lee et al., 2019).
7. Governments (e.g. such as Chinese or South-Korean continuous policymaker initiatives: Koh, 2017; Zhan, & Chan, 2012).

Even policy options and stakeholders' groups based on literature reviews have proposed to promote harm reduction in several Western countries, such it is the case for internet addiction by the European Parliament (Brey, Gauttier, & Milam, 2019; Lopez-Fernandez & Kuss, 2019), or social networking addiction by the United Kingdom (UK) Parliament (Griffiths, Lopez-Fernandez, Throuvala, Pontes, & Kuss, 2018).

The European Parliament has proposed a set of policy options regarding the harmful use of the internet. At an individual level, the target was generalised internet addiction, online video gaming and gambling addictions, and stakeholders targeted were professionals (i.e. researchers, clinicians) users and community agents who could use knowledge, instruments and interventions to minimise internet harms (Lopez-Fernandez & Kuss, 2019). At a social level, it proposed to promote technology that better protects social and internet users, education about the internet and its consequences, social services which will support internet users, incentivising employers to protect workers and establishing governmental multi-stakeholder platforms (Brey et al., 2019). The UK Parliament received public policy advice (Griffiths et al., 2018) to prevent the rise of English adolescents experiencing addictive use of SNS due to smartphones, comorbid problems (e.g. hostility, cyberbullying) and new co-occurring psychological phenomena (e.g. fear of missing out and nomophobia). Recommendations included national-based research to develop new treatment protocols, a scientific working group under the Department of Health to follow up the problem and provide guidance and practice, educational materials and guidelines within the National Curriculum and a multi-stakeholder approach promoting prevention in users, parents and teachers.

Alternatively, other classical models of development and prevention can also strengthen and advance the currently existing policy options and prevention proposals.

Firstly, in the field of behavioural addictions, a pragmatic approach may include the classic social psychiatry concept of primary, secondary and tertiary levels of prevention (Caplan & Grunebaum, 1967). This model has already applied to gaming addiction (Petry et al., 2018). It reduces the incidence, prevalence and severity of these problems respectively and facilitate early detection and interventions (Simeonsson, 1991). Furthermore, this model is in the line of universal, selective and indicated preventive interventions (National Research Council and Institute of Medicine (2019), which has also been applied to prevent internet addiction (Vondráčková & Gabrhelik, 2016). A second classic contribution to this field can be Bronfenbrenner's (1977) ecological model, which refers to the interactions between the individual and the environment which shape the development over time. It can complement the levels of

prevention, as it covers the life span developmental approach, as Swanton and colleagues (2020) requested. The main idea is that users live in settings embedded in a set of systems (i.e. a nested set of systems), which can provide validity to the actions taken in one or more systems simultaneously, but considering the online interactions.

Current research on the prevention of technological addictions has emerged from the conception of the field in the mid-nineties regarding primary prevention (i.e. conceptualising and operationalising the problems and identifying groups at risk). Some advances in this prevention type include internet gaming disorder's consideration as a disease (American Psychiatric Association, 2013), or the Asiatic governments' first public health policies on internet addiction (Koh, 2017). Secondary prevention began with screening studies to estimate prevalence (Kuss, Griffiths, Karila, & Billieux, 2014; Lopez-Fernandez et al., 2017), which continued with education and counselling prevention programs in schools and universities (Neverkovich et al., 2018). The educational organisations have tried to restore healthy technological uses and reduce the prevalence (e.g. problematic mobile phone use; Carbonell, Chamarro, Oberst, Rodrigo, & Prades, 2018). Specialised health services emerged in Western countries (e.g. Germany, Switzerland, Spain) to ameliorate these conditions (Rumpf et al., 2018). Furthermore, it has been developed a few tertiary prevention initiatives to reduce severe outcomes or improve users' quality of life (e.g. hikikomori syndrome multi-national treatment; Teo et al., 2015). Some of these initiatives have required to adapt classic interventions to these new problems, such as using cognitive behavioural therapy for internet addiction (e.g. CBT-IA, Young, 2013), to tackle comorbid problems (e.g. substance use, affective and personality disorders; Wölfling, Beutel, Dreier, & Müller, 2015), or related problems (e.g. systemic approaches; Liu et al., 2015). In line, policy options and preventive strategies must facilitate support to change (e.g. Lopez-Fernandez, & Kuss, 2020). Next steps to advance in public health may be preventive measures at all levels and the need to develop regional guidelines. However, as Petry and colleagues (2018) argued and as current policy options and preventive actions have shown, although primary prevention is essential, the current knowledge of the development and maintenance of technological addictions and their comorbid problems, makes secondary and tertiary prevention levels still difficult to achieve.

Regarding the ecological model (Bronfenbrenner, 1977), it could be considered that the technological addictions field has extensively been researched as follows. First, the individual risk (i.e. the user and his or her characteristics); second, the microsystem which is the layer around the individual and contains the closest persons and structures which he or she interacts (e.g. family in-home, peers in-school, or colleagues in the workplace using smartphones). Third, the mesosystem that contains the interrelations among other major settings across the life span (e.g. for an adolescent user, it can be online interactions among extended family, teachers, or peer groups in online games). Until this last system, all interactions can affect the individual directly, which makes these sets essential for prevention compared to the following sets. The exosystem refers to the larger social system that indirectly affects the individual, such as major institutions of society (e.g. alterations in the neighbourhood, social networks, changes in the world of education or work, mass media, government, or service providers can also influence the user development, such as current pandemic). The macrosystem refers to the larger cultural system (e.g. economic, social, educational, legal, political, religious or societal beliefs that influence individuals indirectly). Concerning Swanton and colleagues' proposal (2020), the majority of the stakeholders' groups are in the latter two major systems, although current research in the field is still based in educational settings. Thus, the more global sets are only partially researched, and further studies are needed to ensure future options and prevention covering all settings in which the users are connected and influence their healthy development.

In summary, current development on online prevention and harm minimisation as well as classical models applied to our field seem to highlight that we are starting to tackle the problem in its complexity. The studies focussing on the risk of developing technological addiction problems has begun to consider individual characteristics (e.g. age, gender, health) and proximal settings (e.g. school, university and work) primarily modelled by their social interactions through technologies (primary preventive targets). At present, in Europe, multi-stakeholder groups are under direction from governmental and research collaborations. Contrarily, in the more experienced Asiatic countries, it seems governments lead the public health strategy with a global response in respect to the levels of prevention (Koh, 2017; Zhan & Chan, 2012). Indeed, researchers have stated that above all by governments and technological industry can lead policy and prevention options (Király et al., 2018; Lee et al., 2019). Perhaps this is a crucial point to strengthen Swanton and colleagues (2019) framework, as the technology industry has a key role in preventing technological addiction problems. There is a need to raise awareness through the technologies to directly inform the user and make him or her conscious about the risks (e.g. in the European Pan European Game Information [PEGI, 2013] content descriptors, maybe can add a label with an icon about 'addictiveness'). Current research has targeted the marketers and app developers, which use freemium model, gamification and make apps ubiquitous which can be confronted through warning labels, stopping points, disclosures in ads, etc. (Berthon, Pitt, & Campbell, 2019).

The stakeholders' framework is a preliminary contribution that can be the first step together with new policy options and prevention strategies to design and test the outcomes of these harm minimisation initiatives. These precautionary measures should target the incidence, prevalence and severity of these problems at all population levels from the governments, technological industries, and other providers (i.e. exosystem). These stakeholders can develop and apply policy options and prevention strategies within the embedded systems, which affect the user. A global evidence-based approach can ensure solid knowledge to

establish a safe environment and guidelines to secure the use of technologies and to enhance wellness and quality of life of users strengthening their online behaviours safely.

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