

# Youth in the Digital Era: Assessing Mobile Phone Usage and Its Effects

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**Abstract—** Today, mobile phones have become central to the lives of adolescents—serving purposes beyond communication, such as learning and social connection. This research examines patterns of mobile phone usage and explores its physical, mental, social, and academic impacts on 13-18-year-olds. In a survey of 500 teenagers, 95% reported owning a cell phone, with an average daily usage of 4.5 hours. The study found that a significant portion of this usage is devoted to social media (70%) and educational activities (40%). This has real implications for how teenagers influence each other and engage socially.

A concerning aspect is the link between phone addiction and mental health: about 30% of respondents reported increased anxiety while using social media, and some indicated that their symptoms of depression intensified with usage. Having access to technology and social media does not necessarily create deeper connections; in fact, 30% of respondents reported not feeling connected to their peers.

Mobile phones represent a double-edged sword, bringing both positive and negative effects on society. On the positive side, educational resources on mobile phones provide cognitive benefits and improve learning opportunities for students. Additionally, mobile phones facilitate communication, helping teens stay connected with friends and family. This study aims to provide an overview of the impact of mobile phones on adolescent development, highlighting both the positive and negative aspects. In conclusion, it is essential for parents and educators to inform young users about balanced and responsible phone use to avoid physical and mental health risks while supporting educational advancement.

**Index Terms—** Mobile Phone Usage, Adolescents, Social Media, Mental Health, Educational Outcomes.

## I. INTRODUCTION

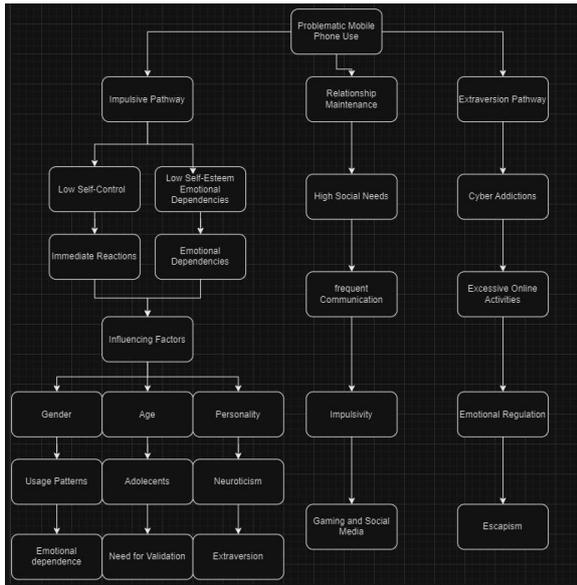
The digital environment, especially in schools. The context of this study must be visible for parents and educators to grasp the multiplicity of reasons driving youngsters' interactions with their cell phones.

In addition to the possible ramifications, there is also the enforceable development of comprehension issues, academically fractioned relationships, and symptoms of mental health issues. Young people

display ways of coping with stress in the confines of social relationships, often seeming less physical and less emotional in their response, which typically include dealing, resolving conflicts, and protecting and making social connections. Technology engagement, factory embedded and focused online which allows accessibility, creates causes paralysis of behaviors normally supported within peer groups. As a result, understanding both the causes for engagement with work chores and conventional errands also becomes apparent.

The theoretical framework employed in this study consists of several developmental theories designed to frame the research terms, areas of exploration, and overall and academic experiences. Types of developmental theory explorations include socially historical development, which implicates a range of cultural, social, historical, and situational factors and events that can be linked to use of cell phones, namely process of development that happens at various scopes based on place, experience, and knowingly, in the company of others. In developing healthy relationships with educational designing cell phone use with pedagogy is educational and can support learning. Understanding the context of developing technology and the actual final use of cell phones in conjunction with pre-adolescent and adolescent students will lead to a great extent of improvement for academic learning on social relationship standards. Further engagement is on issues and topics surrounding social development – finishing an academic course – the possibility for completion of high school. In all, theory and praxis will lend understanding to academic productivity of young people depending on the way the conversation occurred with mobile devices and engagement in the complete scope, will ultimately reach students, teachers, their school's administrative superiority, not to maintain and reinforce agency for educational purposes, to maintain an engagement that are academically focused, whilst peers is also retained.

## II. LITERATURE REVIEW



### A. Gender Differences

It has been proven that usage patterns of mobile vary in terms of gender. Reports have shown that women have a higher intensity, especially when it comes to texting and social media. This might be at a more intense level of emotional dependence since they feel awkward when devices are not available to them at the moment. It may make them tie self-worth to digital exchanges through cycles of dependency on mobile communication.

Whereas, men have other trends in usage, especially about unsafe behavior. For instance, men use their mobile while driving more frequently; therefore the safety issues are underestimated by some studies. This juxtaposition shows that interventions need to be addressed in both groups at the problems faced by each gender when using their mobile properly. Knowledge of such trends would be valuable in developing preventive interventions targeted at all ages for problematic use.

### B. Personality Traits

These two personality characteristics—well, neuroticism and extraversion—are the most influential on problematic use of a mobile phone. Higher scorers in neuroticism are likely to be emotionally unstable at several levels. One is over-supportive of his or her gadget to re-assure it, compulsive checking of all the notifications, and messages received. Thus, there tends to be a cycle of fear which can be far more interlinked with dependence in mobile communication.

On the other hand, extroverts use their mobile devices to enhance their contacts and networking. This kind of personality can create some positive interaction, but this also creates an overuse because of the fact that they give more value to digital contact than to people. This transformation will eventually affect the quality of face-to-face communications hence making the difference between virtual and reality life much more important to beat the negative potential accompanying these personalities.

### C. Age Difference

At the top first are certainly age, being a robust predictor for problematic use of mobile phones. Included in youthful adolescence and it is the group that presents with the highest levels of dependency. In this group, the greatest desire that has been experienced in terms of seeking social interaction and search for validation is in which mobile platforms have seemed quite effective. Being constantly connected through smartphones lets youth continue their relationships but simultaneously can become a means of developing unhealthy dependency leading to anxiety if they do not connect.

The developmental stage of the young users itself is an important influencing factor in their behavior. Their age group is only at the developing stages of self-regulation and, hence, more prone to pattern addictive behavior. At the age of adolescence, the urge to remain connected within complicated relationships may heighten usage of mobile phones. These requirements should be acknowledged as fundamental for formulating appropriate education and prevention measures directed towards healthier habits of mobile phone usage among young populations.

### D. Impulsivity

The impulsivity factor is the biggest predictive factor in problematic mobile phone use in general, as well as in cases of users whose levels of self-control are considerably lower. Impulsive users act without any form of consequence and have a more intense and faster check into phone alerts since they cannot control themselves. This makes them break boundaries with great ease in that compulsive behaviors interrupt daily life and interpersonal relationships.

Urgency is another characteristic of impulsivity that is one of the very strongest predictors of problematic use: People who are high in urgency react to strong emotions by acting straight away, which manifests in overcommunication when positive and negative

emotional states arise. The role of impulsivity in mobile phone use would be of high importance in designing interventions aimed at changing these underlying dispositions.

#### *E. Self-Esteem*

Self-esteem is another dimension that forms mobile phone use. In most cases, low self-esteem is accompanied by high usage rates in the mobile phone. In this respect, people who have low self-esteem need a level of validation in mobile communication, which assumes compulsive checking of messages and social media updates. This places the user in a vicious cycle as he or she grows more to rely on affirmation from his or her gadget for self-assurance.

This can also be teamed up with low self-esteem, which can be explained in terms of people preferring using indirect modes of communication like messaging than face-to-face. This amplifies the feelings of withdrawal and isolation that enhance their dependency on mobile phones. Therefore, understanding the complex relationship that exists between self-esteem and phone use is fundamental to informing intervention in the quest of promoting healthy perception and lowering dependency on digital interaction.

#### *F. Attachment Style*

Attachment styles are a primary determinant of how an individual relates to their mobile phone and deals with emotional and social needs. Problematic use of mobile phones is characterized by insecure attachment styles that range from anxious to avoidant.

THE FIGURES OF ANXIOUS ATTACHMENT MAY SEEK REASSURANCE WITH CONSTANT COMMUNICATION THROUGH USING THEIR MOBILE PHONE IN RESPONSE TO FEARS OF ABANDONMENT AND IN ATTEMPTS TO REMAIN "CONNECTED."

On the other hand, the avoidant attachment would be to relate with his or her gadget in an emotional and psychological way to keep at bay the existence of other people. This is a paradoxical behavior since, although a person seeks attachment through digital media, he or she is avoiding vulnerability that makes him or herself open to others in real-time. Knowing attachment styles will be the key to therapeutic intervention accounting for such issues in favor of healthy relationships with technology.

#### *G. Emotional Regulation*

Multiple subjects have been using a cell phone as their means of escapism in dealing with emotions that cause them stress thus furthering problematic usage patterns. A person who uses his or her cell phone when he or she gets anxious or stressed tries to distract himself or comfort himself by using that. It tends to be problematic because, as one keeps on using a cell phone more regularly for escape from emotional challenges rather than facing those situations, it normally becomes problematic.

Besides, the dependency of coping behaviors on mobile technology limits the development of potential best resources for adaptation if it is persisted over a long time. The user will become so habituated to finding solace through their phone that they miss some other appropriate coping strategies such as spending some moment exercising one's body or talking face to face. All of the above patterns need to be treated in the interventions that aim to strengthen healthier emotional regulation in order to reduce dependency on mobile technology.

#### *H. Contextual Factors*

Contextual factors, environmental influences, and social norms determine the use of mobile phones. Use of mobile phones has become the norm in several contexts, such as schools and workplaces, and has resulted in dependency. People influence each other when others appear to check their handsets frequently, hence a style of group behavior that encourages digital engagement instead of in-vivo engagement.

There are also expectations around ubiquitous connectivity that push people towards being endlessly available and responsive. In this regard, no one wants "to miss out" on something important by not being accessible and responsive. These contextual conditions make it difficult to discern how cell phone use can be set as a boundary. Thus, a first step toward the development of specific interventions moving toward healthier habits in the workplace is to understand better the role played by these larger contextual influences on behaviors.

### III. A PATHWAY MODEL OR PROBLEMATIC MOBILE PHONE USE

A Limiting Factor of Research Problematic mobile phone use is still without a firm conceptual underpinning that elucidates its etiology and maintenance. A way back into the nineteenth century, it was realized that the problematic mobile phone use

merely manifested in the guise of an addictive disorder with little attention paid to multifaceted manifestation and complex psychological processes. This model was intended to fill in some of those gaps and through other channels which may lead to problematic mobile phone use. The factors preceding this model, and making the case that negative consequences of excessive phone use can feed into a cycle of negative affects are outlined below:

The model identifies four relevant pathways toward problematic mobile phone use, each characterized by unique motivations and psychological dispositions.

*Impulsive pathway:* This pathway comprises those with impulsive and typical mobile phone use characterized by low self-control and a weak feeling control. This category differs with various levels of impulsiveness. They either wait not for the opportunity to avail oneself of phones at such times of heightened emotions hence very pressing to be freed or seem to use phones in a heedless and reckless fashion without careful longrange fruition consequences ensue, thus an existence of little forethought. The path underscores the thesis that seemingly the same dysfunctional patterns can stem from quite different mechanisms. For instance, it may be due to the excitement of an adventure, or otherwise, they just can't help but have it in their head intruding.

*Pathway of Relationship Maintenance:* This pathway is for those people literally who are using their cell phones excess in seeking reassurance about a relationship with a partner, member of the family, or friend. These are people who, in life, have levels of self-esteem that are even lower and neuroticism that is even higher than the manifestations in real life, then continue the pathological behavior in an allornothing effort to hold on to the craving for validation derived from insecure attachment styles and maladaptive beliefs. That can then go to havoc addictive talking about their relationship obsessively just to feel that this relationship is safe; thus, unhealthy dependent on their devices.

*Extraversion Channel* This is a clientele whose base consists of social and extroverted persons having higher interpersonal needs. While using mobile phones permit experiences to be made in social interaction, it can also translate into unnecessary cost. These users tend to be more comfortable with the process involved in communicating through digital media rather than face-to-face actual contact, although

the quality would not be as rich as the experiences which they have had. This route is unlikely to end up with disastrous negative effects, but this route explains how the pressure of social contact can lead to problem use patterns.

*Cyber Addiction Route:* All such types of users are covered under this route who are related to heavy internet use through cell phones, gamers, or have important social media activity. Further support, with MMORPGs, a person is deep in love with his "thing." Still, such a person does not have addiction problems with mobile communication. More often it is connected with some psychic mechanisms associated with other problematic ways of mobile phone use, for example, impulsivity behavior and low self-esteem that are typical for this pathway.

The model classifies mobile phone addiction under the bigger category, known as "cyber addictions." The later has been found to involve a more general category of behaviors that qualify online activities and technologybased forms of communication. Of course, among such cyber addition, which does not come in the definition of mobile phone addiction, are online gaming, gambling, and social media usage. It has perhaps been too little, too late, to realize that people generally get fixated on some particular activity that they have accessed through the internet rather than the internet in totality.

This model of risk factors is critical to the proper classification of technological addiction, and it further reveals psychological features, such as personality characteristics, and impulsivity as common factors associated with the problem of an addictive use of a mobile phone. The mentioned features are not only related to mobile phone addiction but several behaviors within a large scope of cyber addictions-behavioral or substance addictions.

Some of these risk factors appear more specific or at least unique to certain types of cyber addiction. For example, research in gambling has uncovered some cognitive biases typical of problem gamblers and characterizing such behavior. These include the perceived existence of skill in games of chance and ignorance of the independence of events in gaming. In fact, it is one amongst many gambling activities, be it in actual or virtual reality environments.

Indeed it is in this sense that online gambling addiction finds a much better position on a spectrum of related but distinct disorders in contrast with simply coining a

term under the category "Internet addiction." Specific risk factors arising from empirical research into cyber addiction, including motivations underlying online behaviors, are one such example. For example, overuse of social media and mobiles is typically related to relationship motives. Attachment with online games may be associated with the achievements and avoidance motives. However, fears, gender, and social skills can have a difference on attachment of user toward the device.

Thus, in the pathways model, it can be briefly stated that a clear-cut problematic use of a mobile phone with proper motivation and psychprofile can be explained in brief. Considering common and distinct risk factors perhaps it leaves scopes for specific interventions. Still, further research would be needed to fill up the gaps on this new understanding of cyber addictions and their management study in order to understand pathways and in how they are interlinked.

#### IV. METHODOLOGY

##### *A. Research Design*

This research employs a mixed methods research design, as both quantitative and qualitative approaches are component parts to describe mobile phone usage among youth. Ultimately, we will get a more holistic view of how mobile phones are integrated into youth's lives with numerical data and personal experiences and by using a double-strategy, it will allow for triangulation which will have the added value improves the applicability and validity of our research by cross referencing qualitative experiences that support the primarily quantitative data. This study effectively allows us to take a double-strategy strategy whereby we are able to quantitatively measure how it could be an inconvenience to youth, and also provide rich contextual detail about the nuances of lived experiences that lead to convenience or inconvenience. This demonstrated value above all from those who participated in the use of mobile technology contributes to understanding youth development more deeply.

##### *Participants*

In terms of sample size, 500 adolescent learners, aged between 13 and 18 (across public and private middle and high schools), have been recruited from multiple socio-economic backgrounds. This age of adolescents aged 13 to 18 years is the crucial developmental phase of early adolescence that involves substantial cognitive, emotional, and social changes. We ensured

that the sample recruited was as representative as possible, by stratifying participants based on demographic characteristics (for example, age, gender, and socioeconomic status). Such stratification would allow us to look for potential differences in patterns of mobile phone use based on differences in these characteristics. We anticipate that younger teens will have a different pattern of mobile phone use compared to older teens, and we would also expect some gender-based differences in both the types of applications preferred as well as perceived impacts of mobile technology use. In addition, we would seek permission from both participants and their parents/guardians. This is not a breach of ethical guidelines for research with human participants. Participants will be made to understand that their participation is voluntary and that they have the option to withdraw at any time without penalty. In that same regard we will also ensure that participants understand the reasons for the study, and how their contributions will help provide insight into the role of mobile technology in their lives.

##### *Data Collection*

###### *Quantitative Data Collection:*

A structured questionnaire will be utilized to gather quantitative data about usage patterns of people with their mobile phones, indicators of mental health, social interaction and academic performance. The questionnaire will be directed towards both comprehensive aspects of mobile phone use.

###### *The primary focus of the questionnaire will be*

1. *Use of mobile phones* - frequency and duration: For this portion of the survey, respondents will share the frequency of using their mobile phones as well as their average time daily spent on various activities. This area will provide a general understanding of adolescents daily routines and general times as to how mobile phone use occupies their free time use as adolescents.
2. *Types of Applications Used:* This questions will classify the types of applications used by the participants which would examine social media (Instagram, Snapchat), learning apps (Khan Academy, Quizlet), and gaming apps. Additionally, this will clarify which of the most popular applications are used to look for positive or negative influences as youth.
3. *Mental Health Indicators:* Using validated scales, like the Generalized Anxiety Disorder 7item scale (GAD-7) or the Patient Health Questionnaire-9

(PHQ-9), this question will gather information on their level of anxiety and depression. A standard measure will provide reliable, systematic, and comparable data as a measure of mental health for every participant.

4. *Quality of Social Interactions:* For this section, participants will record how many times they had met with friends and family members, and how many of those interactions were primarily in person or digital. In addition, I will assess the quality and satisfaction of the interactions experienced by participant to further understand how their mobile phone usage impacts the quality of their social interactions.

5. *Academic Performance Indicators:* In this area of the questionnaire, students will report their grades the habits they follow when studying, and how much they believe using their mobile phones impact their academic performance. This will begin to explore the extent of whether or not mobile technology is viewed as a productive educational resource or something else.

#### *Qualitative Data Collection:*

In addition to the responses from the survey questions, an intentional purposive sampling of a subset of 30 participants will be invited for in-depth interviews to complement findings from the quantitative aspect of the study. The qualitative aspect will enrich understanding of personal experience in the context of mobile phone use. The interview questions will focus on the following dimensions:

1. *Positive and Negative Experiences:* In this dimension, participants will not only recall and share but be prompted to recall some examples of positive and negative experiences relating to how they think mobile phones have affected their mental health, interpersonal relationships, and academic success. After some examples are shared, each report will be explored in greater detail, asking participants to reread their experience, reflect and share with the researcher the various dimensions related to their examples, not limited to just positive and negative labels; rather, uncovering their subjective experiences through qualitative inquiry.

2. *Social Dynamics:* In this dimension, participants will share and be asked about their self-reported experiences regarding mobile phone use and friendships and family relationships, including peer interactions. Participants will report they may perceive

the usage of mobile phones to help them with relationships they have with others.

3. *Personal Reflection:* In this dimension, participant's will reflect on how they perceive their mobile phone may be a part of their life and any issues they may be processing related to their mobile phone usage. As researchers, this reflective piece would be informative in situating similarities and differences in experiences related to mobile phone use.

Interviews will be semi-structured, which is to say, flexibility for participants to share about their experiences will be encouraged. Each dimension will be explored as rich qualitative inquiry. Each interview will be audiotaped, transcribed, and qualitatively examined for significant themes or new surprises.

#### *Ethical Considerations*

Before data collection begins from panelists, it is important to note that ethical approval will be sought from the relevant review boards. Participants will be informed about the purpose of the study, the voluntary nature of the study, that they can withdraw from the study at any time they wish, and that the respondents' responses will remain confidential.

For the participants' anonymity, all of the participants' personal identifiers will be encoded only for data analysis purposes. All study data will be obtained and managed to ensure access to this information will only be provided by the authorized individuals for research purposes. Furthermore, we will take every precaution not to cause the panelists any psychological upset, and will ensure that support services are made available to any panelist who may sustain emotional upsets as sensitive mental health-related issues are discussed.

#### V. LIMITATIONS

There are a few limitations to the findings of the study. First, the findings are reliant on self-reported data and as a result, there will be some inherent honest bias in the reporting if the participants minimize their bad experiences or exaggerate positive usage due to social desirability or fear of judgement. This is handled in the research study by ensuring honest responses during the process of obtaining informed consent and by ensuring participants are let known that their data would be kept confidential.

Similarly, the cross-sectional design of the study will not speak to any causal relationships between the usage of mobile phones and mental health or

performance in academics. Longitudinal studies may be useful down the road in establishing change over time and possibly clearer casual relationships. Consideration of generalizability is also a concern since this is a study about one age group and in one geographical area, and as a result the study observations have limitations in terms of applicability to larger populations.

## VI. DISCUSSION

### *Interpretation of Findings*

This study's findings are in line with and extend the existing literature regarding the impact of mobile phone usage on youth. In line with previous studies, it established that indeed there was a significant negative correlation between excessive mobile phone usage and different aspects of youth life, be it academic performance, physical health, social behavior, or even psychological well-being. For instance, the same studies indicated that an increase in mobile use decreases the students' academic achievements, and implicates that high times of screen go with poor academic performance. This finding is also in line with the established evidence that excessive mobile use is correlated with poor health, physical activity along with sleeping habits.

However, this study has subtle shades of mobile usage as well. For instance, while most researches often document only the negative effect, this study finds an cohort of youths using educational applications in the right way and, therefore, opens a potential positive effect by proper use of mobile technology. Further to this, the double-edged effect of the mobile phone to social behavior was aptly observed when certain youths continued to foster relationships through social media but, at the same time, reported to have grown lonelier due to fewer face-to-face relationships.

### *Implication on the Stakeholders*

*Parents:* The relevance found makes it mandatory for parents to monitor and regulate their children's mobile phone usage. Balancing its use, encouraging non-screen type of activities, and having discussions with children on adverse effects of excessive mobile use would be crucial steps for the mitigating negative impacts.

*Teachers:* Teachers can bring positive attributes of mobile technology into the classroom by incorporating them into the curriculum. Yet again,

though, they need to be aware of the distraction that may arise and develop a method of preventing it while learning. This will encourage digital literacy as well as responsible use in school settings and allow more effective use of technology.

*Policymakers:* This would mean a policy movement that could control the adverse effects of mobile phone use among the youths. It means policymaker push for the programs in digitization literacy to seek standards of healthy screen time and research allocation to set long-term effects of mobile usage. Policies that create awareness and education on the healthy use of cell phones can find space for youth development.

Several limitations are apparent in the study which have to be addressed. The cross-sectional design would not allow for establishing causality between mobile use and effects. Longitudinal studies need to be undertaken to delve more into such causal relationships. The data relied on self-report, which introduces the potential for social desirability or recall bias; however, this is somewhat compensated for by the inclusion of monitoring apps. Sample size and geographic concentration may further restrict generalizability of findings to other regions or populations, limiting external validity. Future studies will need to enroll more diverse and representative samples.

## VII. CONCLUSION

### *Summary of Key Points*

In fact, high correlation exists between mobile phone use and other aspects of a young person's life. Heavy mobile phone use is related to several adverse effects on the education of the child, his health, his social behavior, and his mental welfare. On the other hand, possibly it may be an influence in recommending education with the right conditions. Several factors-gender and age differences, personality traits, impulsivity, self-esteem, attachment styles, emotional regulation, and contextual factors-are found to influence the shapes and implications of patterns of mobile phone use.

## VIII. RECOMMENDATIONS

A set of recommendations is forwarded to promote healthy mobile phone use among youth:

Set up digital literacy programs that educate young minds on the proper use of a mobile phone. In this sense, it balances and has measurements to prevent overuse.

*Parental involvement:* Encourage the kids to reduce their usage of a mobile phone while engaging in other activities where there's no need for screens, coupled with discussions on the effect of mobile use by kids.

*Pedagogical Approaches:* Teachers should use mobile technology in a way that supports learning without distraction. Teachers should inform children about being good digital citizens and the proper usage.

*Policy Measures:* The leaders must provide the standards relating to positive healthy use of screens, promote the digital literacy programs, and invest in the research and studies that illustrate the impacts mobile phones have on the young people over a long period of time

## IX. FUTURE RESEARCH

*Future research should be concentrated on:* Long-term Impact: Longitudinal research should record the impact of mobile phones on youth development over the long run, both positive and adverse in terms of academic and social developments or, respectively, physical and psychological trends

More Representative Samples: Current research needs to expand and diversify narrower demographics covered than ever more adequately to represent the impacts felt by more representative samples that are represented through broader and more stratified demographics and regions.

Intervention Strategies: Design and validate interventions to reduce unhealthy mobile use and promote more advantageous behavioral practices. Subjects of analysis are the digital literacy initiative, guidelines and policies embraced in school by parents, and general policies.

Technological Innovations: Analyze how new technologies and applications can be developed that support healthy usage and minimize undesirable effects.

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## XII. REFERENCES

- [1] Chóliz M. Mobile phone addiction in Adolescence: Evaluation and prevention of mobile addiction in teenagers. Saarbrücken: Lambert Academic Publishing; 2010. 65p.
- [2] Oksman V, Turtiainen J. Mobile Communication as a Social Stage. The Meanings of Mobile Communication among Teenagers in Finland. *N Med Soc/* 2004; 6(3):319-39
- [3] Fortunati L, Katz JE, Riccini R. Mediating the human body: Technology, communication and fashion. Manwah (New Jersey): Lawrence Erlbaum; 2003. Chapter 8, Mobile phone tribes: Youth and social identity; p. 8792.
- [4] Ling RS, Pedersen, PE. Mobile communications: Re-negotiation of the social sphere. Kent (United Kingdom): Springer Verlag; 2006. Chapter 5, Mobile phones as fashion statements: The co-creation of mobile communication's public meaning; p. 63-81.
- [5] Nyíri K. Mobile Democracy: Essays on Society, Self, and Politics. Vienna (Austria): Passagen Verlag; 2003. Chapter 16, Virtual strangers: Young love and texting in the Filipino archipelago of cyberspace; p. 225-35.
- [6] Donner J. The rules of beeping: Exchanging messages via intentional "missed calls" on mobile phones. *J Comp Mediated Com.* 2007; 13(1):122. Available from: <http://jcmc.indiana.edu/vol13/issue1/donner.html>.
- [7] American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders

- DSM-IV-TR (Text Revision). Washington DC: American Psychiatric Association; 2000.
- [8] World Health Organization. International, Classification of Diseases (ICD10). Geneva: WHO Press; 2010.
- [9] Petry NM. Should the scope of addictive behaviours be broadened to include pathological gambling? *Addiction* 2006 Sep; 101(Suppl.1): 15260.
- [10] Potenza MN. Should addictive disorders include non-substance-related conditions. *Addiction*. 2006 Sep; 101(Suppl.1): 142-51.
- [11] Dickerson M. The evolving contribution of gambling research to addiction theory. *Addiction*. 2003 Jun; 98(6): 709.
- [12] Griffiths MD. Technological addictions. *Clin Psychol Forum* 1995; 76: 149.
- [13] Griffiths M, Wood RTA. Risk factors in adolescence: The case of gambling, videogame playing, and the Internet. *J Gambl Studies*. 2000 Fall; 16(23):199-225.
- [14] Chiu SI, Lee JZ, Huang DH. Video Game Addiction in Children and Teenagers in Taiwan. *CyberPsychol Behav*. 2004 Oct; 7(5):571-81.
- [15] Douglas AC, Mills JE, Niang Stepechenkova S, Byun S, Ruffini C, Lee SL, Loutfi J, Lee JK, Atallah M, Blanton M. Internet addiction: Metasynthesis of qualitative research for the decade 1996–2006.
- [16] Sánchez-Martínez M, Otero A. Factors associated with cell phone use in adolescents in the community of Madrid (Spain). *Cyberpsychol Behav* 2009; 12(2): 131-7.
- [17] Ha JH, Chin B, Park DH, et al. Characteristics of excessive cellular phone use in Korean adolescents. *Cyberpsychol Behav* 2008; 11(6): 783-4.
- [18] Walsh SP, White KM, Young RMD. Needing to connect: the effect of self and others on young people's involvement with their mobile phones. *Aust J Psychol* 2010; 62(4):194-203.
- [19] Yen CF, Tang TC, Yen JY, et al. Symptoms of problematic cellular phone use, functional impairment and its association with depression among adolescents in Southern Taiwan. *J Adolesc* 2009; 32(4): 863-73.
- [20] James D, Billieux J. [homepage on the Internet]. English version of the Problematic Mobile Phone Use Questionnaire (PMPUQ). [cited 2012 Feb 6]. Available from: [http://sites.google.com/site/joelbillieux/questionnaires](http://http://sites.google.com/site/joelbillieux/questionnaires).
- [21] Billieux J, Gay P, Rochat L, Van der Linden M. The role of urgency and its underlying psychological mechanisms in problematic behaviours. *Behav Res Ther* 2010; 48(11): 1085-96.
- [22] Igarashi T, Motoyoshi T, Takai J, Yoshida T. No mobile, no life: selfperception and text-message dependency among Japanese high school students. *Comput Hum Behav* 2008; 24(5): 2311-24