



MINDFULNESS BASED INTERVENTION FOR MANAGING PROBLEMATIC USAGE OF MOBILE PHONES

Nandini. J*

Mphil Scholar, Department of Psychology, Women's Christian College, Chennai *Corresponding Author

Sarah Sruti Lall

Assistant Professor, Department of Psychology, Women's Christian College, Chennai

ABSTRACT

Mobile phone being considered an "affective technology" is deeply connected to the emotional lives of users and is a powerful tool in Cyber Psychology. With widespread globalisation, mobile phone addiction has been on the rise in a developing country like India [1]. However, very little scientific research has been done on the effectiveness of various forms of psychological intervention for the treatment of problematic mobile phone usage. In line with this, the present study aims to develop a mindfulness based module exclusively designed to address the said issue and test its efficacy among a group of at-risk late adolescents. A quasi-experimental research design, following a before-after without control paradigm was adopted. A sample of 33 undergraduate female college students between 17-19 years of age ($M_{age} = 18$ years) were purposively selected to take part in the study. The Mobile Phone Problematic Usage Questionnaire (MPPUQ)[2] was used. The target group was exposed to a five hour session on "Mindfulness for problematic phone usage". Repeated measures t-test was used to determine significant changes across the scores on the three dimensions of MPPUQ (preoccupation, withdrawal symptoms and overuse of mobile phones). The results revealed significant difference in MPPUQ scores before and after the intervention with a reduction in scores following the mindfulness based intervention ($t(32) = 1.91, p < .05$). It also revealed a significant decrease in the scores on 'overuse' factor ($t(32) = 2.35, p < .05$) and 'Withdrawal' factor of the MPPUQ ($t(32) = 1.18, p < .01$).

KEYWORDS : Problematic phone usage, overuse, withdrawal, preoccupation, Mindfulness based intervention

World Health Organisation defines overuse as "dependence syndrome" in order to replace the terms addiction or habituation [3]. Definitions of mobile phone addiction are varied. It encompasses the inability to regulate use, resulting in negative physical, psychological and financial consequences; accompanied by signs of craving, tolerance, withdrawal and functional impairment [4]. Tolerance is likely to lead to increasing amounts of usage of the device to achieve the same level of gratification. Withdrawal symptoms include irritability, depression, and annoyance when the user is unable to access the internet or the device, while at the same time engaging in obsessive thinking or fantasies about using the technology to reduce withdrawal symptoms [5][6].

Mindfulness and problematic phone usage

Mobile phones when used functionally can be of great benefit however it is mindlessly immersing oneself in this technology that contributes to problematic usage of this "affective" multimedia device. Doltish use of the phone can manifest itself in the following ways: Constantly consulting a never ending source of information on the phone (e.g: googling everything) instead of taking the time to patiently assimilate and evaluate what may already be in our awareness; stripping ourselves away from the enrichment and awe of the world by digitalising Every moment (e.g: Taking a selfie when one is enjoying a moment with nature); using the mobile phone to avoid time alone with one's thoughts and being extremely focused on "doing" rather than "being"; expanding cyber networks with faceless people rather than investing in meaningful relationships that will help during times of stress [7].

Mindlessness may not only be the cause of problematic phone usage but can be a consequence. Studies have reported that mindfulness is still malleable in adolescents and young adults and many of the facets of mindfulness such as capacity for sustained attention get organised in the prefrontal cortex which continues to develop into young adulthood [8]. But smart phones which are designed to elicit high levels of cognitive engagement and involvement negatively effect the developing system of mindfulness in the young adolescent's brain. Among adults and the elderly, mobile phones create a

habitual response process through conditioning such that the person is not fully attentive to the external stimulus (similar to how one responds during screen time).

Despite the rapid increase in psychological distress associated with problematic phone usage, the number of evidence based research on the effectiveness of various psychological interventions for the treatment of mobile phone addiction has not received sufficient attention in India [1]. The prevailing treatment methods (such as digital detox centres) focus excessively on behaviour modification without addressing the underlying emotional dysregulation. Such strategies only lead to short term relief, often resulting in symptom substitution [7]. A holistic treatment method that addresses the emotional needs of the present generation is mandated. Thus the present study aims to develop a mindfulness based module that incorporates behavioural and cognitive strategies for redefining one's relationship with the self and world and through it, the mobile phone technology.

Method of Investigation

Research design

A quasi experimental research design following a before-after without control paradigm was adopted.

Sample

Purposive sampling was used to select fifty first year undergraduate female students ($M_{age} = 18.3$ years, age range: 17 - 20 years) of the Department of Visual Communication at a college in Chennai. The rationale for choosing students from the Visual Communication department was due to their course work (animation, designing, short filmmaking etc..) that requires them to constantly be in touch with technology (mobile phones, computers). All fifty students took an online survey of the MPPUQ. Of this group only thirty three students were available for the dissemination of intervention.

Tool used

Mobile Phone Problematic Usage Questionnaire (MPPUQ) [2]: MPPUQ is a 24 item questionnaire designed to evaluate the many symptoms associated with maladaptive mobile phone

usage such as mobile phone addiction, withdrawal symptoms and destructive effects on health, social, economic and vocational status. For each item, participants responded on a 5-point scale ranging from strongly disagree (1) to strongly agree (5). The scale assesses three factors : Factor 1 (includes 14 items) accounted for 25.46% of the variance and was called "over use of mobile phone". The second factor included 8 items, which accounted for 18.09 % of the variance and measured "withdrawal symptoms". Factor 3 (contained 2 items), which accounted for 6.32% of the variance and was named "preoccupation"

Psychometric properties.

A test of internal consistency (Cronbach's alpha) was calculated on the MPPUQ and a value of .93 was obtained, demonstrating a high level of internal consistency [4]. The test-retest reliability over a five week period was 0.56 for the overall score, 0.34 for overuse, 0.57 for withdrawal and 0.23 for preoccupation [2]. To assess the construct validity of the MPPUQ, it was correlated with scores on Cellphone Dependency Questionnaire (CPDQ) [4] and a strong positive correlation ($r = 0.70, p < 0.01$) was found. Factor Analysis confirmed the multidimensional nature of MPPUQ. Varimax rotation led to the extraction of three factors (preoccupation, withdrawal symptoms and overuse of mobile phones) with substantial factor loadings (0.36, 0.78, 0.31) [2].

Statistical test

Repeated measures t-test was used to examine significant changes in the dimensions of MPPUQ (preoccupation, withdrawal symptoms and overuse of mobile phones) following the intervention.

Mindfulness based intervention module

The module comprised of the following activities : Introspective exercise on one's relationship with phones followed by psychoeducation on signs, symptoms, physical, psychological and social consequences of pathological phone usage. An introduction to mindfulness was carried out through the "Raisin exercise". The 'what' and 'how' skills of mindfulness were discussed. The "S- O-B-E-R" (stop- observe-breathe-expand- respond) technique was demonstrated and the body scanning exercise was practiced as a group. An exercise on 'Mindful Seeing and Listening' was carried out in pairs. In order to deal with anxiety and withdrawal associated with overuse of mobile phones, self-compassion and urge surfing exercises were demonstrated and practiced. Finally, a goal setting worksheet was used to help manage the time and place where mobile phones will be used.

RESULTS AND DISCUSSION

Table 1

Repeated measures t-test comparing scores on overuse, withdrawal, preoccupation and overall scores on MPPUQ between pre- and post-test conditions of the same group.

Variables	Condition						df	t
	Pre-test			Post-test				
	M	SD	n	M	SD	n		
Overuse	53.11	2.39	33	39.01	3.45	33	32	2.35*
Withdrawal	29.71	4.45	33	19.54	3.11	33	32	1.18**
Preoccupation	5.13	3.61	33	4.12	5.47	33	32	.81
MPPUQ	96.12	4.06	33	63.11	4.12	33	32	1.91*

* $p < .05$, two-tailed

** $p < .01$, two-tailed

Table 1 reveals significant decrease in MPPUQ scores following the mindfulness based intervention ($t(32) = 1.91, p < .05$, two-tailed). This is substantiated by a number of studies which have reported the effectiveness of mindfulness for dealing with addictive behaviours [9]. One explanation for the improvement in problematic phone usage could be the

clarity and non conceptual awareness that mindfulness propagates. This enables a person to live 'in' the present rather than live 'for' the present which is characterised by fatalism, hedonism and impulsivity [10]. Problematic phone usage stems from passive submission to impulsive urges to check the phone and participate in the world in auto-pilot mode without a deeper awareness of its intricacies. Thus mindfulness based interventions may be best suited to advocate the importance of immediacy for full and authentic functioning [11].

Mindfulness increases a person's awareness about the inappropriate use of mobile phones, the triggers, perpetuating factors and the consequences of such usage. This insight will greatly help a person in managing phone usage. It also gives a renewed perspective of the world, allowing one to bathe in the awe and wonders of nature. In addition, mindful speaking and listening exercises instil empathy and openness to one's own and others' experience which strengthens emotional ties, thus reducing the need to form and maintain shallow cyber relationship [12]. The non-critical tenet of mindfulness creates a differential relationship with one's thoughts and emotions. With practice, the person can learn to observe distressing thoughts, emotions and bodily sensations as parts of the conscious experience without labelling them in negative ways. Thus mindfulness may not only reduce problematic phone usage through awareness and acceptance but also prompt emotional regulation which is one of the predictors of maladaptive phone usage [9].

Considering the dimensions of MPPUQ independently, reveals a significant decrease in the scores on the overuse factor of the MPPUQ ($t(32) = 2.35, p < .05$, two-tailed). This is consistent with the idea that mindfulness is not only about being aware but also about knowing when one is not aware (meta-awareness). This meta awareness helps restore the disruption caused by mobile phones; that is the person can recognise the addictive nature of the phone, witness its disruption without judgement and return to being mindful [11]. Also, a significant decrease in the scores on 'withdrawal' factor of the MPPUQ ($t(32) = 1.18, p < .01$, two-tailed) is observed. One of the reasons could be the "Urge surfing" exercise in the module which focused exclusively on dealing with bodily sensations and discomfort that may arise when one is tempted to use the phone at inappropriate times. This mindfulness exercise helps one to register these sensations as mere stimuli within the body that reduces the likelihood of labelling them as 'distressing'. The table reveals a non-significant decrease in the scores on 'preoccupation' factor of the MPPUQ ($t(32) = .81, NS$). It is not clear as to why mindfulness based intervention was not able to produce the same desired effect with this construct as with the other two factors. One reason could be the limited number of items which makes it difficult to capture changes that may be subtle. Another reason could be that the module did not have specific exercises that focussed on dealing with preoccupation and hence may have not promoted change.

CONCLUSION

The results of the study affirm the effectiveness of mindfulness based intervention in improving one's relationship with communication technology. A holistic approach that addresses the underlying emotional deregulation and not just the behavioural symptoms of mobile phone addiction is proved to be efficient in addressing this dire issue.

REFERENCES

- [1] Khan, R., Kiesler, S., Boneva, B., Cummings, J. N., Helgeson, V., & Crawford, A. M. (2008). Internet paradox revisited. *Journal of Social Issues*, 58(1), 49-74.
- [2] Bianchi, A., & Phillips, J. G. (2005). Psychological predictors of problem mobile phone use. *Journal of Cyberpsychology*, 8(1), 39-51.
- [3] Black, D. W., Belsare, G., & Schlosser, S. (1999). Clinical features, psychiatric comorbidity, and health-related quality of life in persons reporting compulsive computer use behavior. *Journal of Clinical Psychiatry*, 60, 839-844.

- [4] Beranuy, M., Chamarro, A., Graner, C., & Carbonell, X. (2003). Validation of two brief scales for Internet addiction and mobile phone problem use. *Journal of Clinical Psychiatry*, 72, 564-572.
- [5] Hoffner, C., Lee, S., & Park, S. (2002). "I miss my mobile phone!": Self-expansion via mobile phone and responses to phone loss. *New Media & Society* [Epub ahead of print] DOI: 10.1177/1461444815592665
- [6] Liang, T. P., & Yeh, Y. H. (2011). Effect of use contexts on the continuous use of mobile services: the case of mobile games. *Personal & Ubiquitous Computing*; 15:187-196.
- [7] Tlalka, S. (2017) The Hidden Cost of Phone Addiction: The dark side of phone addiction: they're a tool for self-avoidance. *Mindful publications*.
- [8] Lo, S. K., Wang, C. C., & Fang, W. (2005) Physical, interpersonal relationships and social anxiety among online game players. *Cyberpsychology & Behaviour*; 8(1): 15-20.
- [9] Shapira, N. A., Goldsmith, T. D., Keck, P. E., Jr., Khosla, U. M., & McElroy, S. L. (2000). Psychiatric features of individuals with problematic Internet. *Journal of Affective Disorders*, 57(1-3), 267-272.
- [10] Kabat-Zinn, J. (2003) Mindfulness-based interventions in context: past, present, and future. *Clinical Psychology Sci Practitioners*; 10:144-156.
- [11] Griffiths, M. (2000). Does internet and computer "addiction" exist? some case study evidence. *Cyberpsychology & Behavior*, 3(2), 211-218.
- [12] Burke, C. A. (2010). Mindfulness-based approaches with children and adolescents: A preliminary review of current research in an emergent field. *Journal of Child and Family Studies*, 19, 133-144. DOI 10.1007/s10826-009-9282-x.