



# Effectiveness of a Nursing Intervention Program on Reducing Smartphone Addiction; its Psychological Consequences among Undergraduates – Preliminary Study

Dixit Kamlesh<sup>1</sup>, Williams Anjana<sup>2</sup>,

Ph. D Scholar, Hemwati Nandan Bahuguna Medical University, Dehradun

Prof. (Dr) Principal, Himalayiya College of Nursing, Sparsh Himalaya, Dehradun

## Abstract

The pervasive use of smartphones among undergraduate students has led to an increase in addiction and associated psychological consequences. This study aims to evaluate the effectiveness of a comprehensive Nursing Intervention Program (NIP) designed to mitigate these issues. Using a sample of 34 undergraduate students from a college in Dehradun, Uttarakhand, data were collected through a smartphone addiction scale and a psychological consequences scale. The intervention included education on healthy smartphone usage and coping strategies. Results showed a significant reduction in smartphone addiction levels and psychological consequences post-intervention. The findings highlight the critical role of targeted nursing interventions in promoting healthier technology use and improving mental health outcomes among students.

**Keywords:** smartphone addiction, psychological consequences, nursing intervention, undergraduate students, mental health.

## Introduction

The exponential growth of smartphone use among young adults has brought about various benefits in terms of connectivity and access to information. However, this surge in usage has also led to a rise in smartphone addiction, particularly among undergraduate students. Smartphone addiction is characterized by an excessive and compulsive use of smartphones, often resulting in negative impacts on academic performance, physical health, and psychological well-being. The constant need to stay connected and the easy access to various forms of digital entertainment contribute to this growing concern.

The psychological consequences of smartphone addiction are profound and multifaceted, including anxiety, depression, sleep disturbances, and reduced physical activity. These consequences not only affect students' mental health but also their overall quality of life and academic performance. Addressing smartphone addiction and its associated psychological issues is thus imperative.

In response to this issue, a comprehensive Nursing Intervention Program (NIP) was developed with the aim of reducing smartphone addiction and its psychological consequences among undergraduate students. The NIP focused on educating students about the risks of excessive smartphone use, promoting healthy usage habits, and providing coping strategies to manage stress and anxiety.

## Methodology

This study utilized a quasi-experimental design with a pretest-posttest approach to evaluate the effectiveness of the NIP. A total of 34 undergraduate students from a selected college in Dehradun, Uttarakhand, were recruited for the study. Data collection instruments included a smartphone addiction scale and a psychological consequences scale, both of which were administered before and after the intervention.

The NIP comprised several sessions, including educational workshops, group discussions, and individual counseling. The workshops covered topics such as the dangers of smartphone addiction, time management skills, and techniques for reducing screen time. Group discussions provided a platform for students to share their experiences and challenges, while individual counseling sessions focused on personalized strategies for managing addiction and psychological stress.

## Results

### Demographic Characteristics

The study involved a total of 34 undergraduate students from a selected college in Dehradun, Uttarakhand. The sample comprised 20 females (58.8%) and 14 males (41.2%), with ages ranging from 18 to 22 years. The participants were primarily enrolled in various undergraduate programs, with a majority pursuing degrees in the arts and sciences.

### Baseline Assessment

At the baseline assessment, the students exhibited high levels of smartphone addiction and associated psychological consequences. The mean pretest score for smartphone addiction was  $47.5 \pm 12.6$ , indicating a substantial dependence on smartphone usage. Psychological consequences, measured using a standardized scale, showed a mean pretest score of  $46.5 \pm 4.33$ , reflecting significant anxiety, depression, and sleep disturbances related to smartphone addiction.

### Intervention Implementation

The Nursing Intervention Program (NIP) was implemented over four weeks and included multiple components designed to address smartphone addiction and its psychological effects. The intervention comprised:

- Educational Workshops:** These sessions provided information about the risks of excessive smartphone use, the impact on mental health, and strategies to manage usage effectively. Topics covered included time management, setting usage limits, and understanding the psychological impact of smartphone addiction.
- Group Discussions:** Facilitated group discussions allowed students to share their experiences, challenges, and successes in managing smartphone use. These sessions promoted peer support and collective problem-solving.
- Individual Counseling:** Personalized counseling sessions focused on identifying individual triggers for excessive smartphone use and developing tailored strategies to cope with stress and anxiety.
- Follow-up Activities:** Students were encouraged to participate in follow-up activities, such as mindfulness exercises, physical activities, and other hobbies that do not involve screen time.

## Post-Intervention Assessment

Following the intervention, there was a marked reduction in smartphone addiction and its psychological consequences among the participants.

- **Smartphone Addiction:** The mean posttest score for smartphone addiction significantly decreased to  $27.5 \pm 12.27$ . This reduction was statistically significant, with a t-value of 20.80 ( $p < 0.001$ ). The decrease indicates that the intervention effectively reduced the dependency on smartphones among the participants.
- **Psychological Consequences:** Similarly, the mean posttest score for psychological consequences improved significantly to  $56.5 \pm 4.33$ . The t-value for this change was 29.82 ( $p < 0.001$ ), indicating a substantial improvement in the psychological well-being of the students. The reduction in scores reflected decreased levels of anxiety, depression, and sleep disturbances.

## Comparative Analysis

A detailed comparative analysis of pre- and post-intervention scores showed a significant improvement in both smartphone addiction and psychological well-being:

- **Addiction Levels:** The percentage reduction in smartphone addiction scores was approximately 42%, demonstrating the effectiveness of the NIP in decreasing addictive behaviors.
- **Psychological Well-being:** The improvement in psychological consequences scores suggested a 21.5% enhancement in mental health, reflecting better sleep patterns, reduced anxiety, and lower levels of depression.

## Qualitative Feedback

Qualitative feedback from participants highlighted several key aspects of the intervention's success:

- **Increased Awareness:** Students reported a better understanding of the risks associated with excessive smartphone use and felt more equipped to manage their usage.
- **Peer Support:** The group discussions were particularly appreciated for providing a sense of community and mutual support, which reinforced individual efforts to reduce smartphone dependency.
- **Practical Strategies:** The individual counseling sessions were instrumental in helping students develop personalized coping mechanisms, which many found to be highly effective in reducing their smartphone usage and managing stress.

## Limitations

While the results are promising, the study had some limitations:

- **Sample Size:** The relatively small sample size of 34 students limits the generalizability of the findings.
- **Short Duration:** The intervention lasted only four weeks, which may not be sufficient to sustain long-term behavioural changes. Longitudinal studies are needed to assess the durability of the intervention's effects.
- **Self-Reported Measures:** The reliance on self-reported data may introduce bias, as students might underreport their smartphone usage or psychological issues.

## Discussion:

The findings of this study underscore the efficacy of the Nursing Intervention Program in addressing smartphone addiction and its psychological consequences among undergraduate students. The significant reduction in addiction levels and improvement in psychological well-being post-intervention highlight the importance of educational and supportive interventions. These results are consistent with previous research that emphasizes the role of structured programs in managing behavioral addictions and promoting mental health.

The success of the NIP can be attributed to its comprehensive approach, which not only provided education but also fostered peer support and offered personalized counseling. This multifaceted strategy ensured that students were not only aware of the risks associated with excessive smartphone use but also equipped with practical tools to manage their usage and associated stress.

## Conclusion

The study concludes that a well-structured Nursing Intervention Program can significantly reduce smartphone addiction and its psychological consequences among undergraduate students. The positive outcomes observed in this study highlight the need for educational institutions to implement similar interventions to promote healthier technology use and enhance the mental well-being of students. Future research should focus on larger sample sizes and long-term follow-ups to further validate these findings and explore additional strategies for managing smartphone addiction.

## References

1. American Psychological Association. (2021). Smartphone addiction and its psychological consequences.
2. Bian, M., & Leung, L. (2015). Linking loneliness, shyness, smartphone addiction symptoms, and patterns of smartphone use to social capital. *Social Science Computer Review*, 33(1), 61-79.
3. Chen, Y. F., & Peng, S. S. (2008). University students' Internet use and its relationships with academic performance, interpersonal relationships, psychosocial adjustment, and self-evaluation. *CyberPsychology & Behavior*, 11(4), 467-469.
4. Jeong, S. H., Kim, H., Yum, J. Y., & Hwang, Y. (2016). What type of content are smartphone users addicted to?: SNS vs. games. *Computers in Human Behavior*, 54, 10-17.
5. Kuss, D. J., & Griffiths, M. D. (2011). Online social networking and addiction—a review of the psychological literature. *International Journal of Environmental Research and Public Health*, 8(9), 3528-3552.
6. Lin, Y. H., Chang, L. R., Lee, Y. H., Tseng, H. W., Kuo, T. B., & Chen, S. H. (2014). Development and validation of the Smartphone Addiction Inventory (SPAI). *PLoS One*, 9(6), e98312.
7. Panova, T., & Lleras, A. (2016). Avoidance or boredom: Negative mental health outcomes associated with use of Information and Communication Technologies depend on users' motivations. *Computers in Human Behavior*, 58, 249-258.
8. Samaha, M., & Hawi, N. S. (2016). Relationships among smartphone addiction, stress, academic performance, and satisfaction with life. *Computers in Human Behavior*, 57, 321-325.
9. Van Deursen, A. J., Bolle, C. L., Hegner, S. M., & Kommers, P. A. (2015). Modeling habitual and addictive smartphone behavior: The role of smartphone usage types, emotional intelligence, social stress, self-regulation, age, and gender. *Computers in Human Behavior*, 45, 411-420.
10. Young, K. S. (1998). Internet addiction: The emergence of a new clinical disorder. *CyberPsychology & Behavior*, 1(3), 237-244.