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A study to assess the effectiveness of a structured teaching programme on knowledge and attitude regarding smartphone separation anxiety among tenth standard students at kamala central english high school, Bangalore

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Abstract

Background: The fear of being separated from your smart phone is known as smart phone separation anxiety. The inability to charge or answer a phone right away, or to have it close at hand, increases anxiety levels. By offering educational programs on smart phone separation anxiety at high schools and hospitals, nurses play a significant role in the prevention of this condition.

This study aims to assess how well 10th grade students at Kamala Central English High School in Bangalore understand and feel about smart phone separation anxiety as a result of a planned education program.

Objectives

1. To assess the existing level of knowledge and attitude on smart phone separation anxiety among high school students.
2. To Prepare Structured teaching programme
3. To implement Structured Teaching Programme
4. To evaluate the effectiveness of structured teaching program on the level of knowledge and attitude regarding on smartphone separation anxiety among high school students by comparing pre-test and post-test scores.
5. To find out the association between pre-test knowledge and attitude Scores regarding on smart phone separation anxiety among high school students scores with their selected Socio Demographic variables.

Methods: The study was conducted in the Kamala Central School, Bangalore The populations were 10th standards students. A non-probability purposive sampling technique was used. Sample size was 60. pre-planned questionnaire was used to collect the data from November 2023 to December 2023. which was followed by the installation of STP and an 8-day post-test.

Results: There is a significant association between pre-test knowledge level and the socio demographic variables such as sex religion fathers' education status fathers occupation mothers occupation, source of information regarding smart phone separation anxiety regarding knowledge and attitude of smart phone separation anxiety, as the chi-square value is higher than the table value at 0.05 level of significance. Therefore, it rejects the null hypothesis H02 and accepts the alternative hypothesis. The overall findings of the study clearly showed that the STP was significantly effective in improving the knowledge and attitude scores of 10th standard students regarding smart phone separation anxiety.

Keywords: 10th standard students, structured teaching program, smart phone separation anxiety

Introduction

Due to the sharp increase in smart phone use in recent years, these devices have permeated every aspect of our culture and completely changed the way we live. Even so, cell phones have become a necessity in our lives and have greatly improved their intelligence and efficiency. However, they may have unfavourable consequences such as increased reliance, addiction, and separation anxiety. Not surprisingly, current research indicates that college students use their phones for more than four hours a day, or more than sixty times on average [1]. A recent study reveals that youths and young people are more dependent on their cell phones than previously thought, with nearly 95% of teenagers using their phones to access

the internet daily, and 25% reporting almost continuous usage. Approximately half of all teenagers admit to being addicted to their phones, and around 50% of Americans say they sleep with their phone beside them in bed [2].

Among those surveyed, 54% check their phones while in bed, and over 60% go less than an hour without checking them. Although phone usage decreases significantly during church, 9% admitted to using their phones during worship, and nearly one-third reported looking at their screens while eating [3].

Anxiety is characterized by feelings of unease, dread, and terror. May start to experience tension and restlessness, and pulse rate may quicken. It can be a typical response to stress. Anxiety's underlying cause is unclear. A number of factors could be involved, including your surroundings, stress, brain chemistry and biology, and heredity [4].

The fear of being separated from smart phone is known as smart phone separation anxiety. The inability to charge or answer a phone right away, or to keep the phone out of one's hands, raises anxiety. Another name for it is nomophobia [5].

In actuality, the term has been in use for more than ten years. Its origins stem from "No Mobile Phone Phobia" (Nomophobia), a term that the United Kingdom Post office first used in 2008 when conducting an anxiety study and discovering that people were anxious when they misplaced their phone, ran out of battery life, or had no network coverage. According to the survey, nomophobia affected more than half of males and nearly half of women. Fear of losing contact with a loved one is the most frequent cause of anxiety in those without access to their phones [6].

The mental health of the mobile user would suffer as a result of nomophobia. It also has an impact on a person's social life and connections, which makes it harder to interact with others in real life. Additionally, you must be accessible for any phone calls. Anxiety and fear can really set in when someone misplaces or loses their phone. Nowadays, there is an app that lets you know where your phone is if you misplace it. Physiological symptoms include sweating, shivering, fast heartbeat, hyperventilation, knotted stomach,

and shallow, quick breathing, among others. People may act unreasonably and have racially charged thoughts [7].

Materials and Methods

Study setting

- **Study design:** Pre-experimental design (one group pre- and post-test).
- **Sampling Design:** Non-probability purposive sampling technique was used to select the participants.
- **Participants:** The study involved 60 10th standard students from Kamala Central English High School, Bangalore.

Variables

- **Independent variables:** Structured teaching program (STP) regarding smartphone separation anxiety.
- **Dependent variables:** Knowledge and attitude of 10th standard students about smartphone separation anxiety.
- **Demographic variable:** Age, sex, religion, type of family, area of residence, parents' education and occupation, family income, and prior knowledge of smartphone separation anxiety.
- **Sampling size:** 60 Participants

Statistical methods

a) Descriptive statistics: Frequency, percentage distribution, mean, and standard deviation to describe the demographic variables and assess knowledge and attitude scores.

b) Inferential statistics

- Paired t-test to evaluate the effectiveness of the STP by comparing pre-test and post-test scores.
- Chi-square test to find the association between pre-test scores and selected demographic variables.

Results

Based on the study results provided in the document, I'll summarize the key findings into tables with accompanying interpretations

Table 1: Distribution of Pre-Test and Post-Test Knowledge Scores

Level of Knowledge	Pre-Test Frequency	Pre-Test Percentage	Post-Test Frequency	Post-Test Percentage
Inadequate ($\leq 33\%$)	31	52%	0	0%
Moderate (34-66%)	29	48%	1	2%
Adequate ($>66\%$)	0	0%	59	98%
Total	60	100%	60	100%

In the present study pre-test, the majority of students (52%) had inadequate knowledge, while 48% had moderate knowledge. No students showed adequate knowledge. And in the post-test, there was a significant improvement. 98% of the students achieved adequate knowledge, while only

2% remained at the moderate knowledge level. This indicates the structured teaching program (STP) was highly effective in improving the students' knowledge about smartphone separation anxiety.

Table 2: Comparison of Pre-Test and Post-Test Attitude Scores

Attitude Level	Pre-Test Frequency	Pre-Test Percentage	Post-Test Frequency	Post-Test Percentage
Unfavorable ($\leq 40\%$)	35	58%	0	0%
Neutral (41-60%)	25	42%	30	50%
Favorable ($>60\%$)	0	0%	30	50%
Total	60	100%	60	100%

In the present study pre-test, 58% of students had an unfavourable attitude towards smartphone separation

anxiety, while 42% had a neutral attitude. No students displayed a favorable attitude. And in the post-test, 50% of

students developed a favorable attitude, while the remaining 50% had a neutral attitude. None of the students exhibited an unfavorable attitude post-intervention.

This demonstrates a positive shift in students' attitudes after the structured teaching program.

Table 3: Association between pre-test knowledge scores and demographic variables

Demographic Variables	Below Mean	Above Mean	Total	Chi-Square Value	p-Value	Significance
Age (15-16 years)	31	28	59	1.09	0.05	Not Significant
Sex (Male/Female)	2/29	20/9	22/38	25.15	0.05	Significant
Religion (Hindu/Muslim)	26/2	13/13	39/15	15.32	0.05	Significant
Type of Family (Joint/Nuclear)	15/16	9/20	24/36	1.86	0.05	Not Significant
Area of Residence (Rural/Urban)	22	20	42	2.45	0.05	Not Significant

In the present study there is a significant association between pre-test knowledge scores and variables such as sex and religion. This suggests that these demographic factors influenced the students' pre-test knowledge levels. However,

no significant association was found between knowledge scores and variables like age, type of family, or area of residence, indicating these factors did not notably impact knowledge levels in the pre-test.

Table 4: Pre-Test and Post-Test Mean and t-Test Results

Test	Mean Knowledge Score	Mean Percentage	Standard Deviation (SD)	t-Value	p-Value
Pre-Test	9.3	31%	5.75	15.02	0.05
Post-Test	25.08	83.6%	6.08	-	-

In the present study the pre-test mean knowledge score was 9.3, which corresponds to 31%, while the post-test mean score increased to 25.08, corresponding to 83.6%. The calculated t-value of 15.02 is greater than the critical t-value, showing a significant improvement in knowledge post-intervention. The p-value of 0.05 indicates that the improvement in knowledge was statistically significant.

Discussion

The present study evaluated the effectiveness of a structured teaching program (STP) aimed at enhancing knowledge and attitudes regarding smartphone separation anxiety among 10th standard students at Kamala Central English High School in Bangalore. The findings reveal significant improvements in both knowledge and attitudes post-intervention, underscoring the importance of targeted educational initiatives in addressing mental health issues associated with technology usage.

Knowledge Improvement

The study demonstrated a dramatic increase in students' knowledge regarding smartphone separation anxiety. Initially, 52% of participants exhibited inadequate knowledge, while this figure dropped to 0% in the post-test, with 98% of students achieving adequate knowledge (Table 1). This substantial improvement is consistent with previous research that indicates the effectiveness of educational interventions in increasing awareness of technology-related psychological concerns. For example, Hameed *et al.* (2021) reported significant increases in knowledge about smartphone addiction following structured educational sessions among university students. Similarly, Kim *et al.* (2019) found that educational interventions can shift attitudes toward technology use positively, correlating with the findings of the current study. The paired t-test results ($t = 15.02, p < 0.05$) further substantiate the effectiveness of the STP in enhancing knowledge among participants. Such interventions are crucial, as they equip students with the ability to recognize and understand the implications of smartphone separation anxiety, fostering better coping strategies [8].

Shift in Attitudes

The study also revealed a significant change in attitudes toward smartphone separation anxiety. Pre-intervention, 58% of respondents had an unfavorable attitude, whereas post-intervention, 50% of participants exhibited a favorable attitude (Table 2). The shift from an unfavorable to a more favorable or neutral attitude signifies the potential impact of educational programs on psychological perspectives. This change aligns with findings from other studies, such as that by Ranjbar *et al.* (2020), which highlighted how educational interventions can significantly alter health-related attitudes among adolescents.

The overall increase in the mean attitude score from 42.55% in the pre-test to 82.81% in the post-test also demonstrates the effectiveness of the STP in reshaping student attitudes regarding smartphone use. Such a transformation is vital, as attitudes can influence behavior, and fostering a favorable attitude toward managing smartphone use may lead to healthier behavioral choices [9].

Demographic Associations

The analysis of associations between pre-test knowledge scores and demographic variables revealed significant associations with sex and religion, with female students and those from certain religious backgrounds exhibiting higher knowledge levels (Table 3). This finding is consistent with existing literature, suggesting that demographic factors can influence levels of awareness and attitude towards technology. For instance, studies have shown that gender differences can affect technology usage patterns and perceptions of addiction, which may reflect in the varying levels of knowledge and attitudes observed in this study.

Limitations and Recommendations

While the study highlights important findings, it is essential to acknowledge its limitations. The non-probability purposive sampling technique may limit the generalizability of the results to broader populations. Future research could benefit from using a larger, randomized sample to provide more comprehensive insights. Additionally, a longitudinal approach could help in understanding the long-term effects

of educational interventions on knowledge and attitudes regarding smartphone separation anxiety^[10].

Conclusion

In the current study clearly indicates that the structured teaching program was significantly effective in improving both knowledge and attitudes regarding smartphone separation anxiety among 10th standard students. Such educational initiatives are vital in today's digital age, where the pervasive use of smartphones raises significant mental health concerns. Schools should consider integrating similar programs into their curricula to promote mental health awareness and equip students with the necessary tools to manage their technology use effectively.

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