"A STUDY TO ASSESS SMART PHONE ADDICTION, SLEEP QUALITY, AND DAYTIME SLEEPINESS AMONG NURSING STUDENTS IN SELECTED COLLEGES KOLAR"

By

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Dissertation submitted to the

Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka.

In partial fulfillment of the requirement for the degree of

Master of Science in Nursing

In

Psychiatric nursing

Under the guidance of

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2025

DECLARATION BY THE CANDIDATE

I hereby declare that this dissertation entitled **"A STUDY TO ASSESS SMART PHONE ADDICTION, SLEEP QUALITY, AND DAYTIME SLEEPINESS AMONG NURSING STUDENTS IN SELECTED COLLEGES KOLAR"**is bonafide and genuine research work carried out by me under the guidance of **Mrs. Jairakini Aruna, Professor and HOD of Psychiatric Nursing,** Sri Devaraj Urs college of Nursing, Tamaka, Kolar.

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ACKNOWLEDGEMENT

"Give thanks to the LORD .for he is good; his love endures forever"

1 Chronicles' 16:34

If a dissertation is not directed by the appropriate person at the appropriate time, has effective supervision, and receives the best expert advice, it typically falls short of expectations.

It would not have been possible to finish this dissertation without the direct and indirect assistance of these luminaries.

For all of the blessings he has experienced over his academic career, the speaker thanks God.

I am particularly grateful to the management of Sri Devaraj Urs College of Nursing for providing me with the means to effectively finish my studies.

This study has been a fruitful and enriching learning experience because of my guide, ***Mrs.JairakiniAruna****, prof and HOD of psychiatric nursing, who has shown me a great deal of interest, guidance, valuable suggestions, cooperation, and constant interaction. Her encouragement has helped me get through all the highs and lows.*

I would like to sincerely thank ***Mrs. Ramya M.,*** *Assistant professor of the psychiatric nursing department at Sri Devaraj Urs College of Nursing, for her persistent attempts to correct me, motivate me, and show personal interest and practice in helping me finish the study.*

I want to express my gratitude to ***Dr. G. Vijayalakshmi,*** *Principal of Sri Devaraj Urs College of Nursing, for her in valuable advice, support, and direction in conducting this study.*

*I express my sincere thanks to **Mrs .Lavanya subhashini** Professor, vice principal and HOD of pediatric nursing for her support ,valuable suggestions and co-operation , and guidance to carry out the study.*

*I express my sincere gratitude to **Dr.Zeanath C.J** Chief Nursing Officer for her support, valuable suggestions and co-operation ,and guidance to carry out the study.*

*I would like to express my gratitude to **Dr.Punitha** Professor, HOD of OBG Nursing, encouragement and valuable ideas that helped me from the initial stages of my study.*

*I am grateful to **Mr. Ravi Shankar**, Professor, Department of Statistics,Sri DevarajUrs Medical College ,Kolar for his expert guidance ,valuable suggestions and assistance in the statistical analysis and interpretation of the data.*

*A profound and deep sense of gratitude to the **librarians** of Sri Devaraj Urs College of Nursing ,For their co-operation.*

I owe personal debt of gratitude to all elderly people who have enthusiastically been a part of the study and the authorities for giving me permission to conduct the study and without their cooperation the study would not have been possible.

*My Sincere thanks and gratitude to all **my friends,and seniors** who have helped me in the successful completion of this study.*

*My deepest and sincere gratitude to my beloved parents **Mr.Bhaskar.M** and **Mrs.Lalitha** for their prayers ,love ,affection ,constant support and encouragement throughout my study and for being at my side in times of difficulties.*

No words can express my appreciation and indebtedness to many of them whose names have not been mentioned who helpful unselfishly and most willingly in the successful completion of this thesis.

Thank you all

Date: *Signature of the Candidate:*

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ABSTRACT

Background

Smartphone addiction, also referred to as *Nomophobia*, is the fear or anxiety of not having access to a mobile phone. Globally, there are 5.22 billion smartphone users, accounting for 66.6% of the population, and this number is rapidly increasing. Among medical and nursing students, high academic stress and excessive smartphone use often contribute to sleep deprivation, poor sleep quality, and daytime sleepiness. Studies indicate gender differences in smartphone use, with males using phones more for gaming and females for social networking. However, limited research has been conducted in India to examine the relationship between smartphone addiction, sleep quality, and daytime sleepiness among nursing students.

Objectives

The study aimed to assess smartphone addiction, sleep quality, and daytime sleepiness among nursing students, and to determine their inter-relationship and association with selected socio-demographic variables.

Methods

A quantitative descriptive correlational design was adopted at Sri Devaraj Urs College of Nursing. A total of 100 B.Sc. Nursing students were selected using simple random sampling. Data were collected using standardized tools (Smartphone Addiction Scale, Pittsburgh Sleep Quality Index, Epworth Sleepiness Scale) and analyzed using descriptive and inferential statistics.

Results

Half of the participants were aged 18–19 years, and half were aged 20–21 years; 98% were female, and all were single. Smartphone addiction levels showed 75% had low addiction, 25% had moderate addiction, and 1% had high addiction. Sleep quality assessment revealed 25% had good sleep, 48% had poor sleep, 15% had moderate disturbance, and 12% had severe disturbance. Daytime sleepiness results indicated 41% had sufficient sleep, 21% average sleep, and 35% insufficient sleep. A weak, statistically insignificant correlation was found between smartphone addiction and daytime sleepiness ($r = 0.087$), leading to acceptance of H01. Smartphone addiction was weakly but significantly correlated with poor sleep quality ($r = 0.341$), leading to rejection of H01. No significant association was found between smartphone addiction and socio-demographic variables, except for educational status and mobile usage.

Discussion/Conclusion

The study highlights that smartphone addiction is significantly associated with poor sleep quality but not with daytime sleepiness among nursing students. Educational status and mobile usage emerged as significant predictors of smartphone addiction. These findings suggest the importance of interventions aimed at reducing smartphone addiction and promoting healthy sleep practices to improve the well-being and academic performance of nursing students.

Keywords: Smartphone addiction, Sleep quality, Daytime sleepiness, Nursing students, Mobile usage, Educational status, Sleep habits.

LIST OF ABBREVATIONS

SI. No	Abbreviation
1	SAS: smartphone addiction scale
2	PSQI: piits burug sleep quality index
3	UG: under graduates
4	PG: post graduates
5	SDUCON: Sri Devaraj Urs College OF Nursing
6	f: Frequency
7	% : Percentage
8	SD : Standard Deviation
9	df : Degree of Freedom
10	P: Chi-square p value
11	*p: Fisher's exact test
12	NS : Not Significant
13	SS : Statistically significant

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ANNEXURES.

CHAPTER-1

INTRODUCTION

Mobile devices are widely used for capturing events, browsing information, and communicating. By 2019, the global cell phone user base is expected to reach 2.7billion, with 33% of the global population using a cell phone by 2017. India, the second most crowded country, has 340 million smartphone users, while China, India, and the United States have 100 million users.[1]

The global smartphone user base, which is estimated to be 5.22 billion, accounts for 66.6% of the global population and is expected to grow 100 million times in the coming years. Adolescents aged 18 to 29 own the largest share of smartphones, with 96% owned by them. Smartphone addiction, also known as Nomophobia, is a fear or anxiety about not having access to a mobile phone. The risky use of smartphones negatively impacts daily goal setting. Education and counseling programs are suggested to prevent this risk. 22% of adolescents aged 18 to 29 report checking their smartphones every few minutes, indicating addiction. Parents have reported that their children are addicted to their smartphones. Studies suggest that increased smartphone use may be linked to musculoskeletal issues, stress, anxiety, sleep problems, and depression.[1]

Smartphone addiction among college-going young adults, particularly medical students, can have adverse effects on their health and well-being. It can lead to physical ailments, behavioral problems, academic interference, reduced social interactions, and negligence in personal life. Additionally, it can disrupt quality sleep, leading to lethargy and excessive sleepiness during daytime working hours. Sleep restoration has been shown to have a strong relationship with better physical,

cognitive, and psychological well-being in adults, adolescents, and children. Therefore, good quality sleep is essential for a student's life, as poor sleep quality increases the risk of physical and mental disorders. Therefore, it is crucial for students to prioritize good sleep quality.[2]

Medical students face high stress levels from the start of their course, making them vulnerable to sleep deprivation. Smartphone addiction can exacerbate this issue, impacting sleep quality and leading to medical errors, job burnout, and depression. The COVID-19 pandemic has increased virtual learning, potentially triggering a vicious cycle of smartphone addiction, sleep deprivation, and mental distress. Studies in Asia suggest smartphone addiction as a defense mechanism for mental health disorders, with 11.1% of medical students in Thailand experiencing depression.[2]

Smartphone/internet addiction leads to various physical and psychological issues, including headaches, neck pain, numbness, dizziness, eye strain, vision problems, carpal tunnel syndrome, repetitive motion injuries, stomach pain, attention deficit, eating disorder, anger, panic attacks, personality and mood disorders, weakening of patience and tolerance, and atrophy .[3]

Studies show that increasing smartphone usage negatively impacts academic performance in student nurses. Males use smartphones for gaming, while females use them for social networking. The increasing need for smartphones among adolescents, particularly the current generation of student nurses, has led to increased smartphone addiction and health issues. [4]

There is a lack of research on addiction and health-related issues among nursing students in India. Understanding the patterns of smartphone usage can help

understand its impact, especially addiction and associated health problems, and raise awareness to combat these issues. This study aims to assess these patterns and their impact on nursing students.[5]

Medical students experience high stress and sleep deprivation, which can be worsened by smartphone addiction, leading to poor sleep, burnout, and depression. The shift to virtual learning during COVID-19 has further fueled this cycle. Studies in Asia report smartphone addiction as a coping mechanism, with 11.1% of Thai medical students experiencing depression.

Smartphone/internet addiction leads to various physical and psychological issues, including headaches, neck pain, numbness, dizziness, eye strain, vision problems, carpal tunnel syndrome, repetitive motion injuries, stomach pain, attention deficit, eating disorder, anger, panic attacks, personality and mood disorders, weakening of patience and tolerance, and atrophy .[3]

Studies indicate that excessive smartphone use negatively affects academic performance in nursing students, with males mainly using phones for gaming and females for social networking. Rising dependence on smartphones among adolescents, especially nursing students, has led to addiction and related health issues. However, limited research exists in India on this topic. This study aims to assess smartphone usage patterns, their impact, and associated health problems to promote awareness and prevention.

NEED FOR THE STUDY

Smartphone addiction can lead to feelings of pity, penalty, epileptic seizures, and depression. It can also cause fears and phobias like nomophobia, FOMO, and plugomania. These can negatively impact an individual's school, work, or private life, reduce communication, and make them insensitive to events around them. Therefore, it is crucial to address and manage smartphone addiction. [6]

Studies show that teens who spend five or more hours a day on electronic devices are 71% more likely to exhibit suicide risk factors. 47% of parents believe their child has a smartphone addiction, and 22% of smartphone users admit to checking their device every few minutes. 41% of teenagers feel overwhelmed by the amount of notifications they receive daily. 33% of teens spend more time socializing online than in-person. Recent studies have found that smart phone overuse is associated with disturbances in sleep, daytime activity, and performance among students. In India, the estimated magnitude of smart phone addiction ranges from 39% to 44%. [7]

The 21st century is known as the age of information technology, with wireless communication and the internet revolutionizing communication. Smartphones, introduced in 2007, have become an essential part of daily life, becoming one of the fastest-growing sectors in the technology industry. Global smartphone ownership and use have increased exponentially, with a projected 2.8 billion by 2020.

Adequate sleep is crucial for growth hormone secretion in young adults, but exposure to blue light from smartphones and computer screens reduces melatonin hormone secretion, affecting circadian rhythm and sleep quality. Smartphone use before sleep has been found to increase latency and decrease sleep time in young people.

Daytime sleepiness significantly impacts students' sleep quality, academic performance, and well-being. Many compensate by napping during classes or free time, which disrupts night sleep and lowers quality of life. In India, 45% of college students report excessive daytime sleepiness, often linked to late-night studying, socializing, substance use, and habits such as coffee, alcohol, and smoking.

Sleep quality in professional college students is influenced by lifestyle, biological, psychological, social, and environmental factors. Key contributors include irregular sleep schedules, exam stress, peer relationships, dormitory environment, late bedtimes, skipping meals, tea consumption, internet and smartphone use, and poor social support. Many students overlook these factors, lacking awareness of healthy sleep habits. This study aims to examine the relationship between daytime sleepiness, sleep-related factors, and overall sleep quality in college students.

Smartphone addiction and poor sleep quality can negatively impact university students' educational performance, potentially leading to low grades in tutorials. Excessive use of smartphones can affect memory, decision-making, learning concentration, and stress- related poor sleep quality can also negatively impact tutorial performance. This study aims to review the relationship between sleep quality and tutorial performance among university students.[12]

CHAPTER -2
OBJECTIVES

This chapter deals with the statement of the problem, objectives of the study, operational definitions, assumptions, hypothesis, conceptual framework which provides a frame of reference for the study.

STATEMENT OF THE PROBLEM

A study to assess smartphone addiction, sleep quality, and daytime sleepiness among nursing students in a selected college, Kolar.

OBJECTIVES OF THE STUDY

1. To assess the smart phone addition among nursing students using the smartphone addiction scale (SAS)
2. To assess the sleep quality among nursing students by using the Pittsburgh scale (PQSI)
3. To assess the daytime sleepiness among nursing students by using the EP Wroth sleepiness scale.
4. To determine relationship between smart phone addiction, sleep quality and day time sleepiness among nursing students
5. To determine the association among the smartphone addiction, daytime sleepiness and sleep quality with selected socio demographic variables

NULL HYPOTHESES

H_{01}- There will be no statically significant relationship between smartphone addiction, sleep quality and daytime sleepiness among nursing students.

H02-There will be no statically significance association between smartphone addiction, sleep quality and daytime sleepiness among nursing students with selected socio demographic variables.

ASSUMPTIONS

1. The quality of sleep may be decreased in smartphone addicted students.
2. The smart phone addiction may be significantly effect on the daytime sleepiness and the quality of sleep among Nursing students

OPERATIONAL DEFINITIONS

1. SMART PHONE: In this present study smart phone refers to a mobile device with advanced features such as a high-resolution touch screen, WIFI connectivity, web browsing, and the ability to accept sophisticated applications.

2. **DAY TIME SLIPPINESS:** In the present study the day time sleepiness refers to**,** Excessive sleepiness interfering with daily activities, school, work, and relationships, as it leads to feelings of exhaustion and drowsiness, affecting overall well-being and functioning, which is measured by EP Wroth scale

3. **QUALITY OF SLEEP:** In the present study Sleep quality refers to a prolonged state of body and mind where the nervous system is inactive, eyes are closed, postural muscles relax, and consciousness is practically suspended. the quality of sleep will be assessed by Pittsburgh scale

4. **NURSING STUDENT**: In the present study nursing student refers to an individual who are enrolled in professional nursing program, in a recognized college.

5. SMARTPHONE ADDICTION: In the present study. the Smartphone addiction is characterized by overuse of mobile devices, very often measured by the frequency of device access and online time, which will be assessed using smartphone addiction scale.

DELIMITATIONS

The study is delimited to

1. The scope is limited to students from a single institution.
2. The study subjects is restricted to 100 samples.

Conceptual framework of the study

The study's conceptual framework comprises interrelated concepts or abstractions that are arranged in a rational scheme due to their relevance to a common theme

The present study is aimed to assess the effectiveness of warm water foot bath therapy on quality of sleep among elderly people in a selected old age homes, kolar district.

Von Bertalanify's general system theory, introduced in 1968, defines a system as an organized unit that produces an effect or product when independent components interact with the environment. Living systems are open systems, promoting the exchange of matter, energy, and information with sub and supra systems.

The exchange between an open system and its supra system is a continuous dynamic balance that helps maintain internal stability by causing changes in one part of the system to affect other parts.

The openness of human system made the investigator to smartphone addiction, sleep quality, and daytime sleepiness among nursing students in a selected college, Kolar.

The Basic Concept of Ludwig von Bertanlanffy General System Model,

1. Input
2. Throughput
3. Output

INPUT: Input refers to the resources, information, or materials entering the system.

In this study, the inputs include:

- Selection of the structured questionnaire.
- Designing the research framework.
- Collection of socio-demographic data: age, gender, marital status, family type, duration of sleep, number of sleep cycles, and hours of mobile usage per day.

THROUGHPUT: Throughput is the process by which inputs are transformed into outputs through actions or interventions.In this study, the throughput includes

- Administering the structured questionnaires to nursing students.
- Assessing smartphone addiction, sleep quality, and daytime sleepiness.

OUTPUT: Output is the result or product generated by the system after processing the inputs.

In this study, the outputs include:

- Assessment results of smartphone addiction, sleep quality, and daytime sleepiness among nursing students.
- Determining the relationship between smartphone addiction, daytime sleepiness, and sleep quality with socio-demographic variables.
- Identifying associations between smartphone addiction, daytime sleepiness, and sleep quality with selected socio-demographic variables.

SUMMARY:

This chapter dealt with the statement of problem, objectives of the study, operational definitions, hypotheses, assumptions, delimitation, conceptual frame work with which provides a frame of reference of study

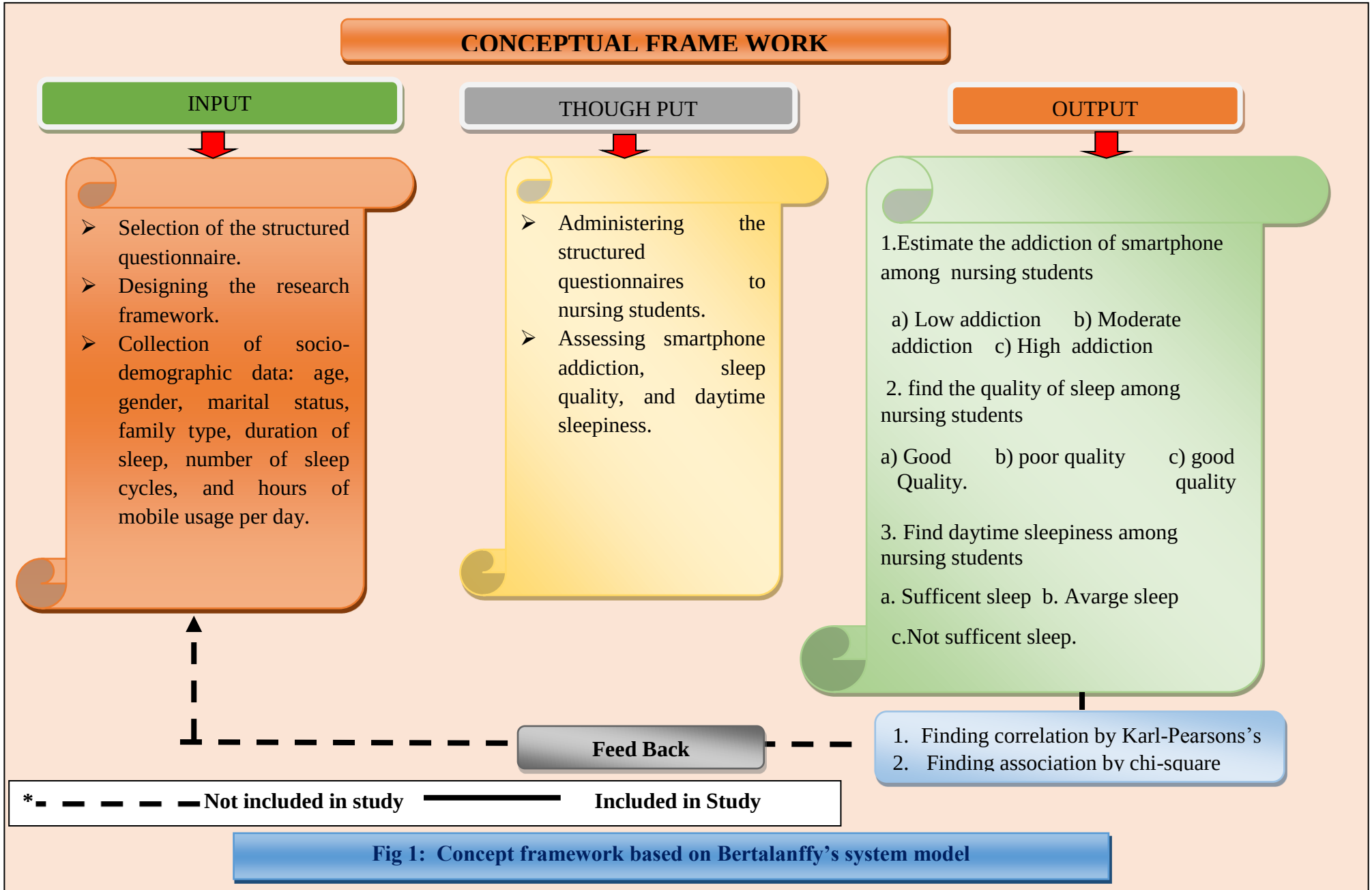

Fig 1: Concept framework based on Bertalanffy's system model

CHAPTER-3

REVIEW OF LITERATURE

Review of literature gives a comprehensive in depth, systematic, and critical review of scholarly publication of the topic. The literature for the present study will be reviewed from the textbook, journals, articles, dissertation, and online sources.

For the present study the literature was reviewed under the following headings

1. Studies related to smart phone addiction and daytime sleepiness.
2. Studies related to quality of sleep.

Studies related to smartphone addiction and daytime sleepiness.

A study was conducted to assess the smart phone addiction and day time sleepiness among 150 medical students in South India. The study revealed that 67 (44.7%) of the students were addicted to smartphone usage, with no significant gender difference. The PSQI revealed poor sleep quality in 77 (51.3%) of the participants, with smartphone addiction significantly associated with poor sleep quality. The findings support early identification and prompt management of mental disorders.[9]

A cross-sectional study was conducted on 150 medical students in South India. To assess the smart phone addiction and its effects on daytime sleepiness using the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders. The study reveals a positive correlation between smartphone addiction and sleep quality, and a fair correlation with psychological issues like depression, anxiety, and stress, suggesting the need for counselling programs.[10]

A cross-sectional study was conducted among 204 undergraduate medical students in a selected medical college of Kolkata. Smartphone addiction, daytime sleepiness and

depression was assessed using the SAS-SV, EPSS and PHQ-9 questionnairesA study found 29.4% of medical students are addicted to smartphones, with 45.5% experiencing sleepiness. Factors include age, gender, and over 6 hour usage. Promoting mental health through motivation, counselling, and peer support groups can help.[11]

A cross-sectional study was conducted to assess the daytime sleepiness and This study analyzed the sleep habits and problems of 382 nursing students using the Epworth Sleepiness Scale (ESS). The results showed a prevalence of 10.5% of students experiencing daytime sleepiness. Students in 2nd grade, married, without coffee or tea, living alone, regarded their academic achievement as poor, and using the Internet during morning hours experienced increased daytime sleepiness. Students who talk in their sleep, grind their teeth, feel restless before sleep, experience problems in falling asleep, and wake up at night also experienced increased daytime sleepiness.[12]

The study aimed to estimate daytime sleepiness prevalence among Omani Nursing students using a cross-sectional research design. The Epworth Sleepiness Scale (ESS) and Perceived Stress Scale (PSS) were used to assess sleepiness and stress index. Results showed a prevalence of 57.4%, with severe excessive sleepiness estimated at 12%. ESS scores were significantly associated with stimulants, program study track, cohort, previous semester GPA, and sleep hours before exams[13]

A cross-sectional study was conducted in Chengalpattu district to assess the prevalence of excessive daytime sleepiness among college students, including Architecture, Medical, and Para-medical students. The study used a modified questionnaire and Epworth sleepiness scale for data collection, with a sample size of 422. Results showed 32% of participants experienced daytime sleepiness, with most

experiencing sleep disturbances due to mobile and laptop usage, stress, overthinking, and night studies.[14]

The study analyzed the sleep habits and socio-demographic characteristics of nursing students using the Epworth Sleepiness Scale (ESS). The results showed that daytime sleepiness was prevalent in 10.5% of students. Students in 2nd grade who were married, did not consume tea or coffee, lived alone, considered their academic achievement poor, and used the internet during morning hours experienced increased sleepiness. Students who talked in their sleep , grind their teeth, felt restless before sleep had problems falling a sleep and wokeup night experienced increased sleepiness. The study concluded that daytime sleepiness is a common health issue in nursing students and is associated with individual characteristics, lifestyle habits, and sleep habits.[15]

A study at a southern Taiwanese institute of technology found that 35% of nursing students experienced excessive daytime sleepiness at the start of the semester. Six variables were significantly correlated with daytime sleepiness, with daytime dysfunction and perceived symptoms being the major determinants accounting for 37.2% of the variance. The study suggests that early identification and mitigation of physical and psychological symptoms is crucial for first-year students to improve daytime functioning, maintain performance, and promote learning achievement.[16]

A study involving 570 Moroccan high school students aged 17-20 found that smartphone addiction negatively impacts sleep quality, daytime sleepiness, and academic performance. The study found that smartphone addiction was positively correlated with poor sleep quality and daytime sleepiness. Conversely, academic performance was negatively correlated with smartphone addiction, poor sleep quality,

and daytime sleepiness. The findings suggest that parents and school health officials should implement awareness campaigns to promote rational and moderate screen use and healthy sleep among high school students. The study underscores the need for parents and school health officials to address this issue and promote healthy sleep habits among students.[17]

Studies related to quality of sleep.

A Cross-sectional design was used to assess smart phone addiction and impacts on sleep quality among nursing students. The study found that 42.4% of nursing students have smartphone addiction, with 57.3% experiencing poor sleep quality and 82.5% experiencing normal sleepiness. Factors influencing addiction include daily smartphone use, owning a smartphone, and academic success.[6]

A study was conducted on smart phone addiction and impacts on sleep quality among B.Sc nursing students at the University College of Nursing. by using the Pittsburgh Sleep Quality Index, the Epworth Sleepiness Scale, and the Smartphone Addiction Scale. revealed that smartphone addiction significantly impacts sleep quality among nursing students, with age and daily calls being significant factors, particularly among lower-age groups, affecting 17.58% of good sleepers and 82.42% of poor sleepers.[7]

A cross-sectional, observational, and questionnaire-based approach was used to assess the smartphone addiction and its effects of sleep quality among B.Sc. Nursing students at University College of Nursing, The questionnaire included sociodemographic variables, smartphone addiction, and sleep quality. Data was compiled and analyzed using MS-Excel from Microsoft Office Package-2016.The

study concludes that smartphone usage is a serious concern, especially among lower-age groups.[8]

A descriptive research examined the sleep quality of 223 volunteer nursing students at Uludağ University Faculty of Health Sciences Department of Nursing. Data was collected through personal features surveys and the Pittsburg Sleep Quality Index (PSQI). The average sleep quality score was 6.52±3.17, with significant discrepancies between PSQI results and smoking habits, total daily sleeping hours, efficient waking up times, and average daily coffee consumption. No significant discrepancies were found between age, gender, living location, morning class sleep, chronic diseases, and daily average tea consumption.[9]

The study aimed to evaluate the sleep quality among nursing students and correlate it with demographic variables. 165 students were selected from a nursing college, and the data was analyzed using descriptive and inferential statistics. Results showed that 18.20% of nursing students had poor sleep quality, while 81.80% had good sleep quality. The majority of nursing students had good sleep quality, while some had poor sleep quality. The study found that 85% of nursing students were female, and 99% were not using any drugs. [10]

Summary

The investigator conducted a literature review to identify the need for a study on smartphone addiction, daytime sleepiness, and sleep quality, establishing a conceptual framework, tool, and data collection technique.

CHAPTER -4

METHODOLOGY

The approach chosen for the investigation is covered in this section. Research methodology, research design, variables, study environment, population, sample, and sampling criteria, motivational therapy selection and development, data collection process, and data analysis strategy are all included

Research methodology is an approach to problem solving. It is a methodical process whereby the researcher begins with initial identification and ends with final findings,

RESEARCH APPROACH

The present study is aimed at to assess smartphone addiction, sleep quality, and daytime sleepiness among nursing students in a selected college, therefore quantitative approach is been suitable for this study.

RESEARCH DESIGN

For the present study descriptive correlational survey design is been considered. were it is more suitable to assess smartphone addiction, sleep quality and daytime sleepiness among nursing students in selected colleges, kolar

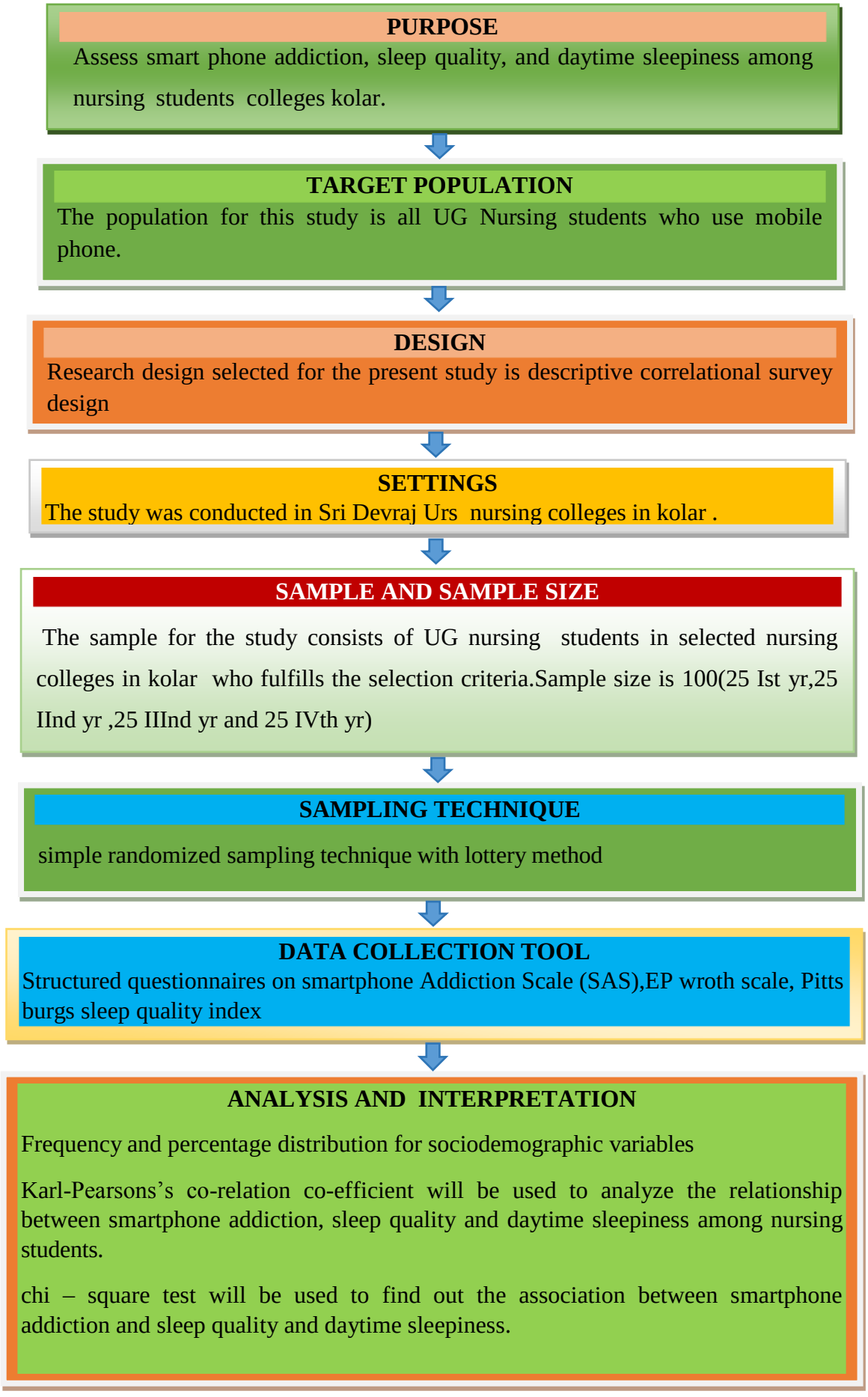

Fig 2: Schematic Representation of Research Design

VARIABLES

Variables are properties or characteristic of some event, object, or person that can take on different values or amounts when conducting research experiments often manipulate variables .A variable as the name implies, is something that varies.[25]

Variables identified in this study were:

Study variables: smart phone addiction,daytime sleepiness and pits burgs sleep quality.

Attribute variables: socio demographic variables of nursing students. I.e It consists of age, gender, marital status, family type, duration of sleep and number of sleep cycles and hours of mobile usage cycle per day.

SETTING OF STUDY

The present Study was conducted in Sri Devaraj Urs college Of Nursing Kolar.

Sri Devaraj Urs College of Nursing, Kolar, offers GNM, BSc, PBBSc, and MSc Nursing programs. Departments include Medical-Surgical Nursing, Obstetrics and Gynecology, Pediatrics, Community Health Nursing, and Mental Health Nursing. Experienced faculty, clinical exposure, and research opportunities enrich students' learning experiences.

POPULATION

The term population refers to the aggregate of all the units in which researcher is interested. [31]

In this study the population refers all nursing students in the college who is using mobile phones

SAMPLE AND SAMPLE SIZE

The subset of the overall population that is included in study is called as Sample.[25]The The sample for the study consists of UG nursing students in Sri Devraj Urs nursing colleges in kolar who fulfills the selection criteria.Sample size is 100(25 Ist yr,25 IInd yr ,25 IIInd yr and 25 IVth yr)

SAMPLING TECHNIQUE

Sampling is the act, process or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population.[25]In the present study simple randomized sampling technique with lottery method is used from the invigilator to the samples.

CRITERIA FOR THE SELECTION OF SAMPLE

Inclusion criteria: UG and PG students

1. The students who had been using smartphones for more than one year.
2. The students aged between 18 to 21 years
3. The students who are willing to participate in the study.

Exclusion criteria: UG and PG students

- The students having psychiatric illnesses associated with smartphone addiction
- Those who won't give consent by signing the ICF

DEVELOPMENT AND DESCRIPTION OF THE TOOL

Data Collection tool are the procedures or instruments used by the researcher to observe or measure the key variables in the research problem.

Based on the objectives of the study following tool were used to collected data.

Tool -1: Socio – demographic profile.

Tool -2: Assessing smartphone addiction using smart phone addiction scale

Tool -3: Assessing day time sleepiness using EP worth scale

Tool-4 : Assessing sleep quality by using Pitts burg sleep quality index

Tool -1: Socio demographic profile

It consists of age, gender, marital status, family type, duration of sleep and number of sleep cycles and hours of mobile usage cycle per day.

Tool-2: The EPWORTH Sleepiness Scale

EP Wroth scale is a widely-used self-administered questionnaire that assesses daytime sleepiness using eight items to rate the likelihood of dozing off in various situations.

Interpretation: The components which are assessed in this scale are

1. Sitting and reading

2. Watching t.v

3. Sitting inactive in public place

4. Lying down afternoon

5. Sitting and talking to some one

6. Being a passenger in the car

7. Stopping for a few minutes in traffic while driving

Scoring : 0-6 you are getting sufficient sleep.

7-9 you are occasionally sleepy during the day.

10 or higher : you are not getting sufficient sleep.

Cronbach's alpha: 0.73-0.91, Test-retest reliability: 0.64-0.90, Validity: 0.70-0.90, indicating good reliability and validity.

Tool-3: The Smartphone Addiction Scale (SAS) is a 33-item self-report questionnaire assessing smartphone addiction.

It consists of six sub-scales:

(1) Positive Anticipation,

(2) Withdrawal,

(3) Tolerance,

(4) Neglect of Other Activities,

(5) Loss of Control, and

(6) Escape from Negative Emotions.

Interpretation of scale :Items: 10

Scoring: 6-point Likert scale (1-6)

- Low addiction: 10-29

- Moderate addiction: 30-44

- High addiction: 45-60

Cronbach's alpha: 0.83-0.92, Test-retest reliability: 0.80-0.90, Validity: 0.70-0.92, indicating good reliability and validity.

Tool-4: The Pittsburgh Sleep Quality Index (PSQI) is a 19-item self-report questionnaire that evaluates sleep quality in seven components: subjective sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disturbances, use of sleep medication, and daytime dysfunction. Its global scores range from 0 to 21, with higher scores indicating poorer sleep quality.

Cronbach's alpha: 0.83, Test-retest reliability: 0.85-0.90, Validity: 0.80-0.90, indicating good reliability and validity.

Method of data collection

Data collection is process of gathering and evaluating data from various sources to answer questions, and solve research problems.

The data was collected from 23/9/24 to 26/9/24

STEP-1

The permission was obtained from ethical committee of Sri Devaraj Urs College of nursing, kolar.

STEP-2

Permission was obtained from the authorities of Sri Devaraj Urs College of nursing, kolar

1. To conduct the study written permission was obtained from the authorities of Sri Devaraj Urs college of nursing prior to the data collection.

2. The exact date and time was planned with respective class coordinators of B.Sc Nursing.

STEP-3

Informed consent was obtained from the study participants.

1. Before collecting data, the investigator made sure to acquaint herself with the vulnerable subjects and clarified the study's objectives to them.

2.The investigator asked the participants for their complete cooperation and guaranteed the confidentiality of their answers.

3.Written informed consent was obtained from the participants involved in the study.

STEP-4

Data was collected from B.Sc Nursing students by using smartphone addiction scale, day time sleepiness and Pittsburgh sleep quality scale

1. Subjects were collected based on the inclusion criteria by simple random sampling technique by lottery method.

2. Subjects were divided int 4 groups those are (25) 1^{st} yr B.Sc , (25) 2^{nd} yr B.Sc , (25) 3^{rd} yr B.Sc and (25) 4^{th} yr B.Sc nursing

3. The data was collected from the subjects in four days allotting each day for each year.

PLAN FOR DATA ANALYSIS

Data obtained was analyzed by using descriptive and inferential statics

1. Frequency and percentage distribution for socio demographic variables

2. Karl-Pearsons's co-relation co-efficient will be used to analyze the relationship between smartphone addiction, sleep quality and daytime sleepiness among nursing student.

3. chi – square test will be used to find out the association between smartphone addiction and sleep quality and day time sleepiness among nursing students.

Summary

An overview of the full process of approaching a research problem in a methodical and scientific way is provided by research methodology. The research approach, research design, sample and sampling procedure, research environment, tool reliability, content validity, pilot study, data collection method, and data analysis plan were all covered in this chapter. The development of the analysis and interpretation chapter that follows greatly depends on this chapter

CHAPTER -5

DATA ANALYSIS AND INTERPRETATION

Data was analyzed using descriptive and inferential statistics based on study objectives.

STATEMENT OF THE PROBLEM

A study to assess smart phone addiction, sleep quality, and daytime sleepiness among nursing students in selected colleges kolar.

OBJECTIVE OF THE STUDY

1. To assess the smart phone addition among nursing students using the smartphone addiction scale (SAS)

2. To assess the sleep quality among nursing students by using the Pittsburgh scale (PQSI)

3. To assess the daytime sleepiness among nursing students by using the EP Wroth sleepiness scale.

4. To determine relationship between smart phone addiction, sleep quality and day time sleepiness among nursing students

5. To determine the association among the smartphone addiction, daytime sleepiness and sleep quality with selected socio demographic variables

NULL HYPOTHESES

H01- There will be no statically significant relationship between smartphone addiction, sleep quality and daytime sleepiness among nursing students.

H_02-There will be no statically significance association between smartphone addiction, sleep quality and daytime sleepiness among nursing students with selected socio demographic variables.

PRESENTATION OF DATA

To begin with, data was entered in a master sheet for tabulation and statistical processing. The findings were presented under following headings.

Section I: Frequency and percentage distribution of Socio-demographic variables of B.Sc Nursing students.

Section II: Frequency and percentage distribution of sleep quality among nursing students.

Section III: Frequency and percentage distribution of daytime sleepiness among nursing students

Section IV: Frequency and percentage distribution of smart phone addiction among nursing students

Section V: Determining the relationship between smartphone addiction and daytime sleepiness among nursing students.

Section VI: Determining the relationship between smartphone addiction and sleep quality among nursing students.

Section VII: Finding the association between smartphone addiction, daytime sleepiness and sleep quality among nursing students

Section I: Socio Demographic variables

Table 1: Distribution of baseline characteristics in terms of frequency and percentage

N=100

Sl.no	Sample characteristic	Frequency (f)	Percentage (%)
1.	**Age (in Years)**		
	18-19	50	50
	20-21	50	50
2.	**Gender**		
	Male	02	02
	Female	98	98
3.	**Educational status**		
	Ist year B.sc Nursing	25	25
	2nd year B.sc Nursinhg	25	25
	3rd year B.sc Nursing	25	25
	4th year B.sc Nursing	25	25
4.	**Marital status**		
	Un married	00	00
	single	100	100
5.	**Type of family**		
	Nuclear	80	80
	Joint Family	18	18
	Extended family	02	02
6.	**Sleep cycles**		
	Once a day	73	73
	Twice day	21	21
	More than two times	06	06
7.	**Mobile use**		
	3hrs	46	46
	4hrs	37	37
	5hrs	12	12
	More than 5 hrs	04	04
8.	**Sleep cycles hours**		
	5hrs	05	05
	6hrs	43	43
	7hrs	37	37
	8 hrs	15	15

Data presented in the Table -1 shows the following

AGE: The majority outcomes of the study shows that 50% (50) among the nursing students were 18-19 and 50% (50)of the nursing students were 20-21 age group.

GENDER: The outcomes of the study shows that 2% (2) among the nursing students were males and 98%(98) are female

MARITAL STAUES : The majority outcomes of the study shows that 100% (100) were singles among the nursing students.

EDUCATION : The majority outcomes of the study shows that 25%(25) were from 1st year B.Sc , 25% (25) were from 2nd year B.Sc ,25%(25) were from 3rd year B.Sc nursing and 25% (25) were from 4th year B.Sc nursing among the selected nursing students.

TYPE OF FAMILY: The majority outcome of the study shows that 80% (80) were belong to nuclear family ,18% (18) belong to joint family and 2% (2) belong to the extended family among the nursing students

SLEEP CYCLES : The majority outcome of the study shows that 73% (73) sleeps once a day ,21% (21) sleeps twice a day and 6% (6) students sleep more than twice a day among the nursing students

MOBILE USEAGE : The majority outcome of the study showes that 46% (46) were using their smartphone for 3 hrs , 37%(37) were using 4 hrs ,12%(12) were using for 5hrs and 4% (4) were using their smart phone more than 5 hrs among the nursing students.

SLEEP CYCLE HOURS : The majority outcome of the study shows that 5% (5) were sleeping for 5hrs, 43%(43) were sleeping for 6hrs, 37% (37) were sleeping for 7hrs and 15%(15) were sleeping for 8hrs among the nursing students

Section II-Frequency and percentage distribution of sleep quality among nursing students.

table-2: Frequency and percentage distribution on smartphone addiction among nursing students.

N=100

Addiction rate	Frequency (f)	Perscent (%)
Low addiction	74	74
Moderte addiction	25	25
High addiction	1	1

Data presented in table-2- Discusses about the smartphone addiction among the nursing students, here 75% (75) students presented low addiction of smartphone, 25%(25) students presented moderate smartphone addiction, 1%(1) students presented high addiction of smartphone among the nursing students.

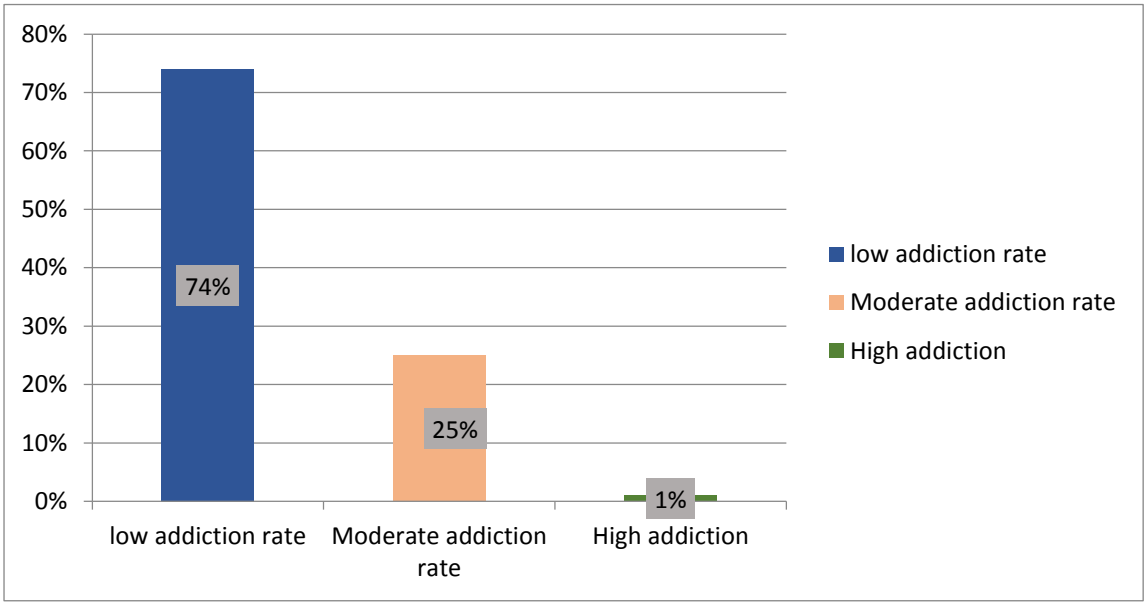

Fig-3:Frequency and Percentage distribution on Smartphone Addiction among Nursing students.

SECTION III: FREQUENCY AND PERCENTAGE DISTRIBUTION ON QUALITY OF SLEEP AMONG NURSING STUDENTS

table-3: Frequency and Percentage distribution on quality of sleep among Nursing students N=100

Sleep quality	Frequency (f)	Percentage (%)
Good sleep quality	25	25
Poor sleep quality	48	48
Moderate sleep distrubence	15	15
Severe sleep disturbance	12	12

Data presented in table-3 - Discusses about the quality of sleep among the nursing students, here 25% (25) students presented good sleep quality of sleep, 48%(48) students presented poor sleep quality, 15%(15) students presented moderate sleep disturbance and 12% (12) students presented severe sleep disturbance among the nursing students

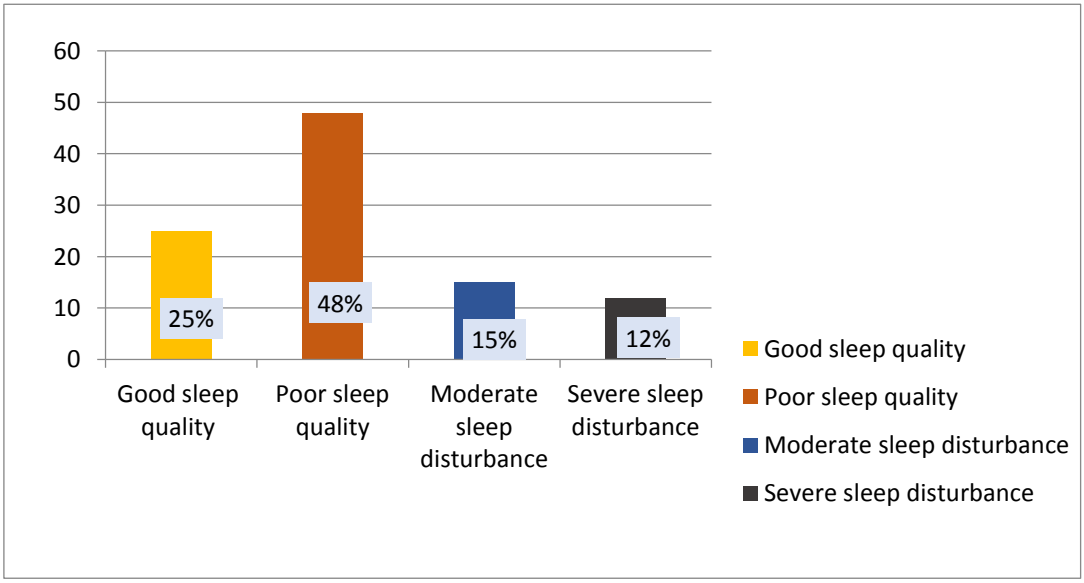

Fig-4:Frequency and Percentage distribution on quality of sleep among Nursing students

SECTION IV: FREQUENCY AND PERCENTAGE DISTRIBUTION ON DAYTIME SLEEPINESS AMONG NURSING STUDENTS

table-4: Frequency and percentage distribution on day time sleepiness among nursing students N=100

Components	Frequency (f)	Percent (%)
Sufficient sleep	41	41
Avarage sleep	24	24
Not sufficient sleep	35	35

Data presented in table-4 - Discusses about the daytime sleepiness sleep among the nursing students, here 41% (41) students presented sufficient sleep, 21%(21) students presented average sleep , 35%(35) students presented with not sufficient sleep.

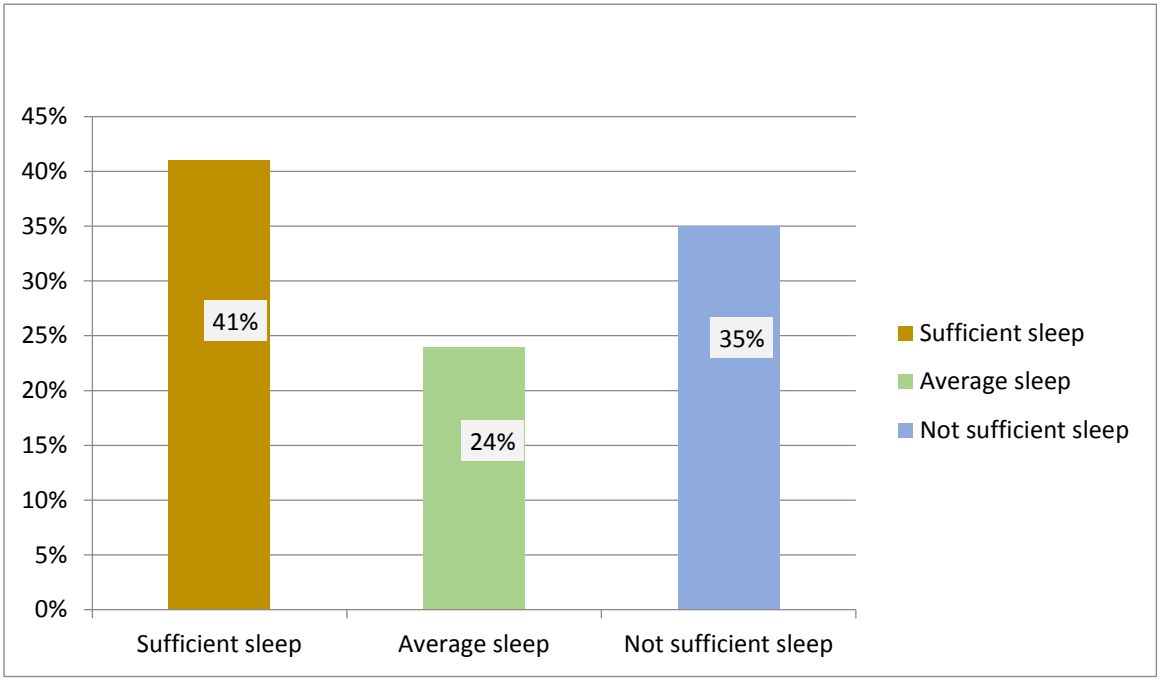

Fig 5- Frequency and percentage distribution on day time sleepiness among nursing students

SECTION V : CO-RELATION BETWEEN SMARTPHONE ADDICTION AND SLEEP QUALITY AMONG NURSING STUDENTS.

table-5: Co-relation between smartphone addiction and sleep quality among nursing students. N=100

SL.NO	Variables	Mean	Co-relation	Significance
1.	Smartphone addiction	23.0	r= .341	P<0.05
2.	Sleep quality	8.75		

Table 5 : Smartphone addiction is weakly correlated with poor sleep quality (r = 0.341), indicating that increased smartphone addiction is associated with decreased sleep quality. This suggests that limiting smartphone use before bedtime may help improve sleep quality which is clinically significant.

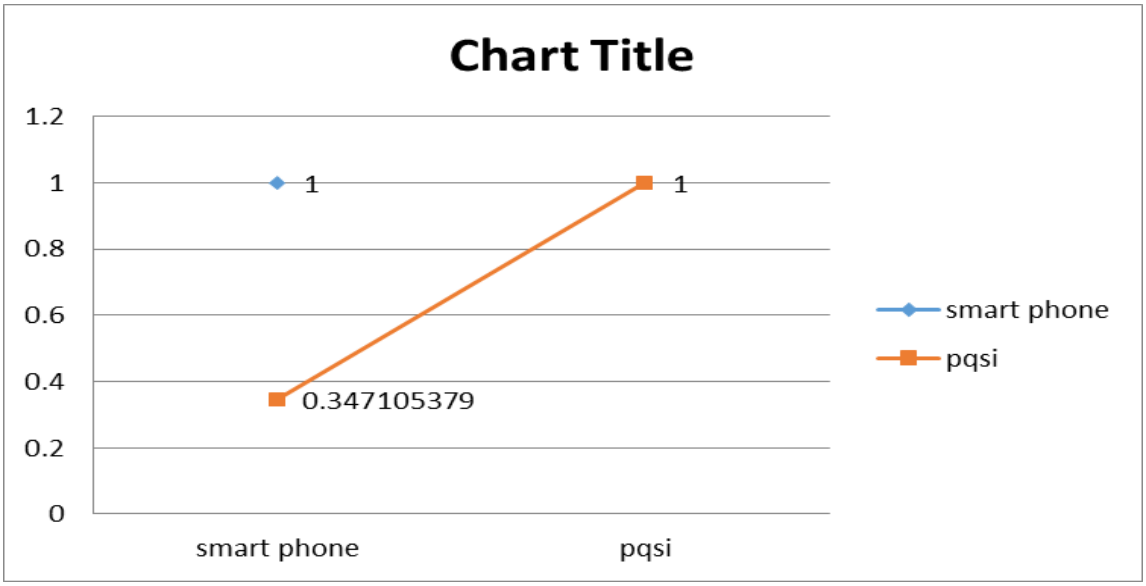

Fig 6- co-relation between smartphone addiction and sleep quality among nursing students.

SECTION VI - CO-RELATION BETWEEN SMARTPHONE ADDICTION AND DAYTIME SLEEPINESS AMONG NURSING STUDENTS.

Table-6 Co-relation between smartphone addiction and daytime sleepiness among nursing students. N=100

SL.NO	Variables	Mean	Co-relation	Significance
1.	Smartphone addiction	23.0	r= .087	P<0.05
2.	Daytime sleepiness	7.69		

Table 6- The correlation between smartphone addiction and sleepiness among nursing students (r = 0.087) is weak co-relation indicating a limited relationship.The correlation is not clinically significant.

"Smartphone addiction has a weaker effect on daytime sleepiness (r = 0.87)

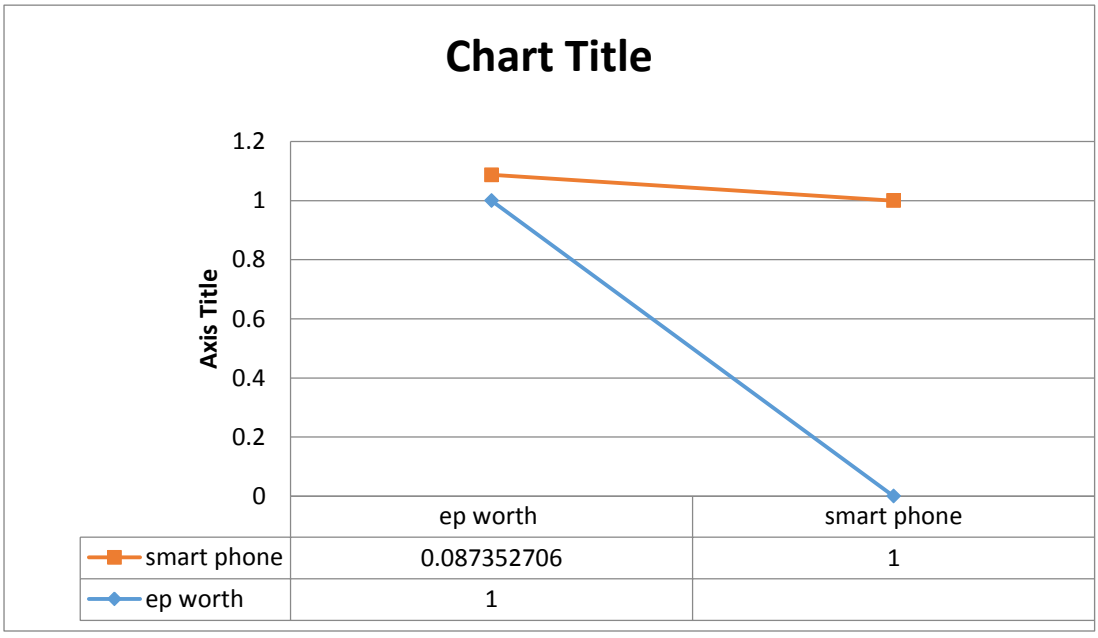

Figure 7- co-relation between smartphone addiction and daytime sleepiness among nursing students.

SECTION -VII : ASSOCIATION BETWEEN SMARTPHONE ADDICTION, SLEEP QUALITY AND DAYTIME SLEEPINESS AMONG SELECTED SOCIO DEMOGRAPHIC VARIABLES.

Table-7 Association between smartphone addiction, sleep quality and daytime sleepiness among selected socio demographic variables. N=100

Sl.no	Variables	Below Median <23.0	Median and above > 23.0	Chi square	df	P value (0.05)	Inference
1	**Age (in Years)**						
	18-19	28	22	1.000	1	.317	NS at $p <$ .05.
	20-21	23	27				
2	**Gender**						
	Male	01	01	0.000	1	.977	*NS* at $p <$ .05.
	Female	50	48				
3.	**Educational status**						
	1st and 2nd year B.sc Nursing	30	20	4	1	.045	SS at p<.05.
	3re and 4th year B.sc Nursing	20	30				
4.	**Marital status**						
	Married	00	00	0.00	1	*p	NS at p<.05.
	Single	51	49				
6.	**Mobile usage**						
	3-4 hrs	47	39	5.315	1	.0211	SS at at p<.05.
	>5hrs	03	11				

NS=NON SIGNIFICANT SS=STASTICALLY SIGNIFICANT *P= FISHERS EXACT 'P' VALUE

Table-7: The findings revealed no significant association between most socio-demographic variables and smartphone addiction (χ^2 < table value at df=1, p<0.05). Hence, the null hypothesis (H_{o2}) was accepted, except for educational status and mobile usage, which showed a significant association.

Table -8 Association between the daytime sleepiness with socio demographic variables N=100

Sl.no	Variables	Below Median <7.69	Median and above > 7.69	Chi square x^2	df	P value (0.05)	Inference
1	**Age (in Years)**						
	18-19	37	**14**	14.8	1	.000	SS at $p < .05$.
	20-21	**16**	33				
2	**Gender**						
	Male	00	**02**	0.237	1	*p-0.23	*NSS* at $p < .05$.
	Female	**51**	47				
3.	**Educational status**						
	1st and 2nd year B.sc Nursing	36	14	16.0	1	.000	SS at p<.05.
	3re and 4th year B.sc Nursing	**16**	34				
4.	**Marital status**						
	Married	00	**00**	0.00	1	*p	NSS at p<.05.
	Single	**51**	49				
5.	**Hours of sleep**						
	5-6hrs	27	23	0.04	1	.841	NSS at at p<.05.
	7-8hrs	**26**	24				

NS=NON SIGNIFICANT SS=STASTICALLY SIGNIFICANT *P= FISHERS EXACT 'P' VALUE

Table-8: The findings showed no significant association between most socio-demographic variables and daytime sleepiness (χ^2 < table value at df=1, p<0.05). Thus, the null hypothesis (H_{02}) was accepted, except for educational status and age, which showed a significant association.

Table 9: showing the association between the sleep quality among the socio demographic variables **N=100**

Sl.no	Variables	Below Median <8	Median and above > 8	Chi square x^2	df	P value (0.05)	Inference
1	**Age (in Years)**						
	18-19	28	22	0.660	1	.414	NS at $p < .05$.
	20-21	32	18				
2	**Gender**						
	Male	01	01	0.01	1	.747	*NS* at $p < .05$.
	Female	60	38				
3.	**Educational status**						
	1st and 2nd year B.sc Nursing	28	22	0.37	1	.541	NS at p<.05.
	3re and 4th year B.sc Nursing	31	19				
4.	**Marital status**						
	Married	00	00	0.0	1	*p	NS at p<.05.
	Single	60	40				
5.	**Sleep cycle**						
	1-2times	57	37	1.738	1	.187	NS at at p<.05.
	>2 times	02	04				

NS=NON SIGNIFICANT SS=STASTICALLY SIGNIFICANT *= FISHERS EXACT 'P' VALUE

Table-9: According to the findings the association between socio demographic variables with Sleep quality. where almost all the variables chi-square value had less than the table value for df=1 at p<0.05. Since there is no associative between the socio demographic variable and sleep quality ; null hypothesis $Ho_2$was accepted

SUMMARY

This chapter presented the analysis and interpretation of findings using descriptive and inferential statistics. Data were compared based on demographic factors to assess nursing students' smartphone addiction, sleep hygiene, and daytime drowsiness, and to determine their interrelationships. Results revealed a weak correlation between smartphone addiction and sleep quality, while no significant association was found between smartphone addiction, daytime sleepiness, and selected sociodemographic factors."

CHAPTER - 6

DISCUSSION

The study's main conclusions are presented in this chapter along with a discussion of how they relate to other researchers' comparable studies.

OBJECTIVES OF THE STUDY

1. To assess the smart phone addition among nursing students using the smartphone addiction scale (SAS)
2. To assess the sleep quality among nursing students by using the Pittsburgh scale (PQSI)
3. To assess the daytime sleepiness among nursing students by using the EP Wroth sleepiness scale.
4. To determine relationship between smart phone addiction, sleep quality and day time sleepiness among nursing student.
5. To determine the association among the smartphone addiction, daytime sleepiness and sleep quality with selected socio demographic variables

MAJOR FINDINGS OF THE STUDY;

Description of socio-demographic data

1. The outcomes of the study shows that 50% (50) among the nursing students were 18-19 and 50% (50)of the nursing students were 20-21 age group

2. The outcomes of the study shows that 2% (2) among the nursing students were males and 98%(98) are female

3. The outcomes of the study shows that 100% (100) were singles among the nursing students.

4. The outcomes of the study shows that 25%(25) were from 1st year B.Sc , 25% (25) were from 2nd year B.Sc ,25%(25) were from 3rd year B.Sc nursing and 25% (25) were from 4th year B.Sc nursing among the selected nursing students.

5. The outcome of the study shows that 80% (80) were belong to nuclear family ,18% (18) belong to joint family and 2% (2) belong to the extended family among the nursing students

6. The outcome of the study shows that 73% (73) sleeps once a day ,21% (21) sleeps twice a day and 6% (6) students sleep more than twice a day among the nursing students

7.The outcome of the study showes that 46% (46) were using their smartphone for 3 hrs , 37%(37) were using 4 hrs ,12%(12) were using for 5hrs and 4% (4) were using their smart phone more than 5 hrs among the nursing students.

8. The outcome of the study shows that 5% (5) were sleeping for 5hrs, 43%(43) were sleeping for 6hrs, 37% (37) were sleeping for 7hrs and 15%(15) were sleeping for 8hrs among the nursing students

Smartphone addiction among nursing students as measured by smartphone addiction scale

Data presented in table-2 - Discusses about the smartphone addiction among the nursing students, here 75% (75) students presented low addiction of smartphone, 25%(25) students presented moderate smartphone addiction, 1%(1) students presented high addiction of smartphone among the nursing students.

Sleep quality among nursing students as measured by pits burgs sleep quality index

Data presented in table-3 - Discusses about the quality of sleep among the nursing students, here 25% (25) students presented good sleep quality of sleep, 48%(48) students presented poor sleep quality, 15%(15) students presented moderate sleep disturbance and 12% (12) students presented severe sleep disturbance among the nursing students

Study findings are supported by The study aimed to evaluate the sleep quality among nursing students and correlate it with demographic variables. 165 students were selected from a nursing college, and the data was analyzed using descriptive and inferential statistics. Results showed that 18.20% of nursing students had poor sleep quality, while 81.80% had good sleep quality. The majority of nursing students had good sleep quality, while some had poor sleep quality. The study found that 85% of nursing students were female, and 99% were not using any drugs. [10]

Daytime sleepiness among nursing students as measured by EP worth scale.

Data presented in table-4 - Discusses about the daytime sleepiness sleep among the nursing students, here 41% (41) students presented sufficient sleep, 21%(21) students presented average sleep , 35%(35) students presented with not sufficient sleep.

Study findings are supportrd by A study which was conducted to assess the smart phone addiction and day time sleepiness among 150 medical students in South India. The study revealed that 67 (44.7%) of the students were addicted to smartphone usage, with no significant gender difference. The PSQI revealed poor sleep quality in 77 (51.3%) of the participants, with smartphone addiction significantly associated

with poor sleep quality. The findings support early identification and prompt management of mental disorders.[9]

Co-relation between smartphone addiction and sleep quality among nursing students.

Table 5: Smartphone addiction is weakly correlated with poor sleep quality (r = .341), indicating that increased smartphone addiction is associated with decreased sleep quality. This suggests that limiting smartphone use before bedtime may help improve sleep quality. Hence the H01- is rejected

Co-relation between smartphone addiction and daytime sleepiness among nursing students.

Table 6:The correlation between smartphone addiction and sleepiness among nursing students (r = 0.087) is weak correlation indicating a limited relationship.The correlation is not clinically significant.. Hence the H01- is accepted

Association between smartphone addiction among selected socio demographic variables.

Table-7: According to the findings the association between socio demographic variables with smartphone addiction scale. where almost all the variables chi-square value had less than the table value for df=1 at $p<0.05$. Since there is no association between the socio demographic variable and smartphone addiction ; null hypothesis $Ho_2$was accepted, except educational statues and mobile usage.

Association between the daytime sleepiness with socio demographic variables

Table 8: According to the findings the association between socio demographic variables with daytime sleepiness. where almost all the variables chi-square value had less than the table value for df=1 at $p<0.05$. Since there is no association between the socio demographic variable and daytime sleepiness ; null hypothesis $Ho_2$was accepted, except educational statues and age.

Association between the sleep quality among the socio demographic variables

Table 9: According to the findings the association between socio demographic variables with Sleep quality. where almost all the variables chi-square value had less than the table value for df=1 at $p<0.05$. Since there is no associative between the socio demographic variable and sleep quality ; null hypothesis $Ho_2$was accepted.

SUMMARY:

This chapter has majorly discussed with the study findings such as smartphone addiction, sleep quality ,daytime sleepiness among the nursing students and relationship between smartphone use, sleep quality and daytime sleepiness and the association between smartphone addiction, quality of sleep and daytime sleepiness with the selected socio demographic data.

CHAPTER 7

CONCLUSION

This chapter covers the importance of a research study, as well as its results, restrictions, suggestions, and ramifications for nursing research, practice, and education.

This study aimed to assess smart phone addiction, sleep quality, and daytime sleepiness among nursing students in selected colleges kolar.

The following conclusions were drawn based on the findings of the study:

Distribution of baseline characteristics in terms of frequency and percentage

1. The outcomes of the study shows that 50% (50) among the nursing students were 18-19 and 50% (50)of the nursing students were 20-21 age group.

2. The outcomes of the study shows that 2% (2) among the nursing students were males and 98%(98) are female

3. The outcomes of the study shows that 100% (100) were singles among the nursing students.

4. The outcomes of the study shows that 25%(25) were from 1st year B.Sc , 25% (25) were from 2nd year B.Sc ,25%(25) were from 3rd year B.Sc nursing and 25% (25) were from 4th year B.Sc nursing among the selected nursing students.

5. The outcome of the study shows that 80% (80) were belong to nuclear family ,18% (18) belong to joint family and 2% (2) belong to the extended family among the nursing students

6. The outcome of the study shows that 73% (73) sleeps once a day ,21% (21) sleeps twice a day and 6% (6) students sleep more than twice a day among the nursing students

7.The outcome of the study showes that 46% (46) were using their smartphone for 3 hrs , 37%(37) were using 4 hrs ,12%(12) were using for 5hrs and 4% (4) were using their smart phone more than 5 hrs among the nursing students.

8. The outcome of the study shows that 5% (5) were sleeping for 5hrs, 43%(43) were sleeping for 6hrs, 37% (37) were sleeping for 7hrs and 15%(15) were sleeping for 8hrs among the nursing students

Smartphone addiction among nursing students as measured by smartphone addiction scale

Data presented in table-2 - Discusses about the smartphone addiction among the nursing students, here 75% (75) students presented low addiction of smartphone, 25%(25) students presented moderate smartphone addiction, 1%(1) students presented high addiction of smartphone among the nursing students

Sleep quality among nursing students as measured by pits burgs sleep quality index

Data presented in table-3 - Discusses about the quality of sleep among the nursing students, here 25% (25) students presented good sleep quality of sleep, 48%(48) students presented poor sleep quality, 15%(15) students presented moderate sleep disturbance and 12% (12) students presented severe sleep disturbance among the nursing students

Daytime sleepiness among nursing students as measured by EP worth scale.

Data presented in table-4: Discusses about the daytime sleepiness sleep among the nursing students, here 41% (41) students presented sufficient sleep, 21%(21) students presented average sleep , 35%(35) students presented with not sufficient sleep.

Co-relation between smartphone addiction and daytime sleepiness among nursing students.

Data presented in table-5: The correlation between smartphone addiction and sleepiness among nursing students (r = 0.087) is weak correlation , indicating a limited relationship.The correlation is not clinically significant.. Hence the H01- is accepted.

Co-relation between smartphone addiction and sleep quality among nursing students.

Data presented in table-6: Smartphone addiction is weekly correlated with poor sleep quality (r = 0.341)and clinically significant indicating that increased smartphone addiction is associated with decreased sleep quality. This suggests that limiting smartphone use before bedtime may help improve sleep quality. Hence the H01- is rejected

Association between smartphone addiction among selected socio demographic variables.

Table-7: According to the findings the association between socio demographic variables with smartphone addiction scale. where almost all the variables chi-square value had less than the table value for df=1 at $p<0.05$. Since there is no association

between the socio demographic variable and smartphone addiction ; null hypothesis $Ho_2$was accepted, except educational statues and mobile usage.

Association between the daytime sleepiness with socio demographic variables

Table 8: According to the findings the association between socio demographic variables with daytime sleepiness. where almost all the variables chi-square value had less than the table value for df=1 at $p<0.05$. Since there is no associative between the socio demographic variable and daytime sleepiness ; null hypothesis $Ho_2$was accepted, except educational statues and age.

Association between the sleep quality among the socio demographic variables

Table 9: According to the findings the association between socio demographic variables with Sleep quality. where almost all the variables chi-square value had less than the table value for df=1 at $p<0.05$. Since there is no associative between the socio demographic variable and sleep quality ; null hypothesis $Ho_2$was accepted.

The study conclude that there is no significant association between the smartphone addiction, sleep quality and daytime sleepiness among the selected socio demographic veriables

IMPLICATIONS OF THE STUDY

This study was conducted to assess the smartphone addiction, sleep quality and daytime time sleepiness among nursing students in selected college kolar.The study findings have the implications on nursing practice, nursing education, nursing research and nursing administration.

Findings of the study will be helping for

Nursing practice

The outcomes of the study shows that majority of the nursing students who are addicted to their smartphone have poor quality of sleep and daytime sleepiness. Therefore the psychiatric nurse can conduct health education about improving the sleep and about the adverse effect of the smartphone on their mental health and help them in the relaxation techniques to improve their sleep quality to decrease daytime sleepiness among the nursing students.

Nursing education

Outcomes of the study will be highlighting the importance of sleep quality among the smartphone addiction students.

Nursing administration

1.Appropriate teaching/learning materials needs to be prepared and made available for health education programme.

2.An administrator must be responsible to co-ordinate all health education and public awareness programme.

3 An administrator is a motivator to all other nursing personnel to contribute their maximum potential to buildup a safe and healthy individual.

4.Nursing administration can arrange some daily sessions of relaxation techniques to improve sleep quality

NURSING RESERCH

The findings of the study serve as a basic for the nursing body of knowledge

1.To demonstrate the efficacy of motivational treatment, more research studies can be carried out in this field.

2.Interdisciplinary research teams should be involved in the study, and journals and other periodicals should be used to disseminate the results.

De-limitations

1.The scope is limited to students from a single institution.

2.The study subjects is restricted to 100 samples.

Recommendations

Based on the outcomes the study recommendations offered for the study are.

a. A similar study can be conducted to the largest population for generalizing the findings.

b. The same study can be replicated as true experimental study.

c. A similar study can be replicated on different age groups. a control group.

Summary:

This chapter has brought out the veracious implications of the study and provided recommendations studies of this kind should be conducted to yield more reliable results.

CHAPTER-8

SUMMARY

Smartphone addiction among college-going young adults, particularly medical students, can have adverse effects on their health and well-being. It can lead to physical ailments, behavioral problems, academic interference, reduced social interactions, and negligence in personal life. Additionally, it can disrupt quality sleep, leading to lethargy and excessive sleepiness during daytime working hours. Sleep restoration has been shown to have a strong relationship with better physical, cognitive, and psychological well-being in adults, adolescents, and children. Therefore, good quality sleep is essential for a student's life, as poor sleep quality increases the risk of physical and mental disorders. Therefore, it is crucial for students to prioritize good sleep quality[2]

This present study is undertaken to assess the smartphone addiction, sleep quality and daytime sleepiness among nursing students in selected colleges kolar.

OBJECTIVES OF THE STUDY

1. To assess the smart phone addition among nursing students using the smartphone addiction scale (SAS)
2. To assess the sleep quality among nursing students by using the Pittsburgh scale (PQSI)
3. To assess the daytime sleepiness among nursing students by using the EP Wroth sleepiness scale.
4. To determine relationship between smart phone addiction, sleep quality and day time sleepiness among nursing students

5. To determine the association among the smartphone addiction,daytime sleepiness and sleep quality with selected socio demographic variables

NULL HYPOTHESES

H01- There will be no statically significant relationship between smartphone addiction, sleep quality and daytime sleepiness among nursing students.

H02- There will be no statically significance association between smartphone addiction, sleep quality and daytime sleepiness among nursing students with selected socio demographic variables.

ASSUMPTIONS

1. The quality of sleep may be decreased in smartphone addicted students.
2. The smart phone addiction can significantly effect on the daytime sleepiness and the quality of sleep among Nursing students

The present study is aimed at assessing the smartphone addiction, sleep quality and daytime sleepiness. By the standardized scales the investigator has adopted the Ludwig Von Bertalanffy's General system theory which was found suitable smartphone addiction, sleep quality and daytime sleepiness. Ludwig Von Bertalanffy's General system theory elaborately explained of input, throughput, output. Which is suitable for the present study. Descriptive research designed was used to assess the smartphone addiction, sleep quality and daytime sleepiness. students who was selected by simple random sampling technique.

Review of literature and discussion with experts helps the investigator to select the appropriate standardized scales for the data collection and designed the methodology

for the study. Data was collected using smartphone addiction scale, EP wroth scale and Pitts burg sleep quality scale

Distribution of baseline characteristics in terms of frequency and percentage

1. The outcomes of the study shows that 50% (50) among the nursing students were 18-19 and 50% (50)of the nursing students were 20-21 age group.

2. The outcomes of the study shows that 2% (2) among the nursing students were males and 98%(98) are female

3. The outcomes of the study shows that 100% (100) were singles among the nursing students.

4. The outcomes of the study shows that 25%(25) were from 1st year B.Sc , 25% (25) were from 2nd year B.Sc ,25%(25) were from 3rd year B.Sc nursing and 25% (25) were from 4th year B.Sc nursing among the selected nursing students.

5. The outcome of the study shows that 80% (80) were belong to nuclear family ,18% (18) belong to joint family and 2% (2) belong to the extended family among the nursing students

6. The outcome of the study shows that 73% (73) sleeps once a day ,21% (21) sleeps twice a day and 6% (6) students sleep more than twice a day among the nursing students

7.The outcome of the study showes that 46% (46) were using their smartphone for 3 hrs , 37%(37) were using 4 hrs ,12%(12) were using for 5hrs and 4% (4) were using their smart phone more than 5 hrs among the nursing students.

8. The outcome of the study shows that 5% (5) were sleeping for 5hrs, 43%(43) were sleeping for 6hrs, 37% (37) were sleeping for 7hrs and 15%(15) were sleeping for 8hrs among the nursing students

Smartphone addiction among nursing students as measured by smartphone addiction scale

Data presented in table-2 - Discusses about the smartphone addiction among the nursing students, here 75% (75) students presented low addiction of smartphone, 25%(25) students presented moderate smartphone addiction, 1%(1) students presented high addiction of smartphone among the nursing student.

Sleep quality among nursing students as measured by pits burgs sleep quality index

Data presented in table-3 - Discusses about the quality of sleep among the nursing students, here 25% (25) students presented good sleep quality of sleep, 48%(48) students presented poor sleep quality, 15%(15) students presented moderate sleep disturbance and 12% (12) students presented severe sleep disturbance among the nursing students

Daytime sleepiness among nursing students as measured by EP worth scale.

Data presented in table-4 - Discusses about the daytime sleepiness sleep among the nursing students, here 41% (41) students presented sufficient sleep, 21%(21) students presented average sleep , 35%(35) students presented with not sufficient sleep.

Co-relation between smartphone addiction and daytime sleepiness among nursing students.

Data presented in table-5: The correlation between smartphone addiction and sleepiness among nursing students (r = 0.087) is weakly correlated , indicating a limited relationship.The correlation is not clinically significant.. Hence the H01- accepted

Co-relation between smartphone addiction and sleep quality among nursing students.

Data presented in table-6: Smartphone addiction is weakly correlated with poor sleep quality (r = 0.341), indicating that increased smartphone addiction is associated with decreased sleep quality. This suggests that limiting smartphone use before bedtime may help improve sleep quality. Hence the h01- is rejected.

Association between smartphone addiction among selected socio demographic variables.

Table-7: According to the findings the association between socio demographic variables with smartphone addiction scale. Where almost all the variables chi-square value had less than the table value for df=1 at $p<0.05$. Since there is no association between the socio demographic variable and smartphone addiction ; null hypothesis $ho_2$was accepted, except educational statues and mobile usage.

Association between the daytime sleepiness with socio demographic variables

Table 8: According to the findings the association between socio demographic variables with daytime sleepiness. Where almost all the variables chi-square value had less than the table value for df=1 at $p<0.05$. Since there is no associative between the

socio demographic variable and daytime sleepiness ; null hypothesis $Ho_2$was accepted, except educational statues and age.

Association between the sleep quality among the socio demographic variables

Table-9: According to the findings the association between socio demographic variables with sleep quality. Where almost all the variables chi-square value had less than the table value for df=1 at $p<0.05$. Since there is no associative between the socio demographic variable and sleep quality ; null hypothesis $ho_2$was accepted.

SUMMARY:

On the whole, carrying out the present study was an enriching experience for the investigator to build self confidence in taking up further research studies. The study has given an insight for the investigator regarding the importance of assessing the smartphone addiction, sleep quality index and daytime sleepiness.

CHAPTER-9

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ANNEXURE-1

ETHICAL COMMITTEE CLEARANCE

SRI DEVARAJ URS COLLEGE OF NURSING
Tamaka, Kolar-563 103, Karnataka.
(Affiliated to RGUHS, Bangalore and Recognized by KNC, Bangalore & INC, New Delhi)
ISO 9001:2015 Certified& NAAC Accredited
Phone: 9480880802 E-mail: sduconson@yahoo.com, Website: sducon.ac.in

Ref,:No. SDUCON/IEC/PG-145/2023-2024 **Date: 09-05-2024**

From,
The Institutional Ethics Committee
Sri Devaraj Urs College Of Nursing
Tamaka, Kolar-563103

To
Ms Nandhini
MSc Nursing Student
Mental Health Nursing
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563103

This is to certify that the Institutional Ethics Committee of Sri Devaraj Urs College of Nursing, Tamaka, Kolar has examined and unanimously approved M.Sc. (N) Topic: **A study to assess the Knowledge on the Prevalence and Predisposing factors of Smart phone Addiction, Sleep Quality, and Daytime Sleepiness among Nursing students in selected colleges Kolar** of **Ms Nandhini**, under the guidance of **Prof.JairakiniAruna,** HOD Mental Health Nursing and Co-Guide **Mrs. Ramya**, Assistant Professor Dept. of Mental Health Nursing of Sri Devaraj Urs College of Nursing Kolar.

Member Secretary
CHAIR PERSON
ETHICS COMMITTEE
SRI DEVARAJ URS COLLEGE OF NURSING
TAMAKA KOLAR - 563103.

Chairperson
CHAIR PERSON
ETHICS COMMITTEE
SRI DEVARAJ URS COLLEGE OF NURSING
TAMAKA KOLAR - 563103.

ANNEXURE-II

PERMISSION LETTER TO CONDUCT THE STUDY

PERMISSION TO CONDUCT STUDY

From,
Miss. Nandini.M
Ist year M.Sc. (N) Student
Sri Devaraj Urs College of Nursing
Tamaka, Kolar – 563101.

Date: 25/7/24.
Place: Kolar.

To,
The Principal,
Sri Devaraj Urs College of Nursing
Tamaka, Kolar- 563101.

Respected Madam / Sir,

Through the Guide &HOD of Psychiatric Department and Principal, SDUCON, Kolar.

Sub: Requesting permission to collect data from Nursing students -reg

With the subject to the above, I the under signed student of I year M.Sc. Nursing under the Department of Psychiatric Nursing specialty would like to collect data for the mini research study on A STUDY TO ASSESS SMART PHONE ADDICTION, SLEEP QUALITY, AND DAYTIME SLEEPINESS AMONG NURSING STUDENTS IN SELECTED COLLEGES KOLAR. As a partial fulfilment of my M.Sc. Nursing curricular requirement.

- Hence I request you to grant permission to collect data from 3rd year nursing students of Sri Devaraj Urs College of nursing and do the needful. Here with I am enclosing my research Synopsis, tool and ethical clearance for your kind consideration.

Thanking you

yours faithfully,
Mrs. Nandini.M

Enclosure:

- **Synopsis**
- **Tool**

Copy to:

1. The Prinicipal,Sri Devaraj Urs College of Nursing Tamaka, Kolar
2. Class coordinator of 3rd B.SC Nursing, Sri Devaraj Urs College of Nursing.

Forwarded to principal for the needful
25/7/25

Permitted & forwarded to Research cell, SDUCON to note
25/7/24

ANNEXURE-III

CERTIFICATE FROM STATICIAN

CERTIFICATE FROM STATISTICIAN

I hereby certify that I have provided statistical guidance in analysis to Ms. Nandini.M, II[nd] Year MSc Nursing student, for her research study titled as **"A STUDY TO ASSESS SMART PHONE ADDICTION, SLEEP QUALITY, AND DAYTIME SLEEPINESS AMONG NURSING STUDENTS IN SELECTED COLLEGES KOLAR"**at Sri Devaraj Urs college of Nursing, Tamaka, Kolar.

Date: 26/5/25

Place: Tamaka, Kolar

Signature of Statistician

Mr. SRAVISHANKAR

Professor

Dept. of Community Medicine,

SDUAHER, Tamaka, Kolar.

Dr. G. Ravishankar
Asst. Professor, Statistics
Dept. of Community Medicine
SDUMC, Kolar-563103

ANNEXURE-IV

(A) Written Informed Consent Form

Study Title: A STUDY TO ASSESS SMART PHONE ADDICTION, SLEEP QUALITY, AND DAYTIME SLEEPINESS AMONG NURSING STUDENTS IN SELECTED COLLEGE KOLAR.

Code Number:

I confirm that I have read and understood the information given to me about this study and my role in it. I had opportunities to ask questions and my questions have been answered to my satisfaction.

Or

I confirm that all information about this study and my role in it has been read / explained to me by a member of the investigating team in a language that I understand. I had opportunities to ask questions and my questions have been answered to my satisfaction.

a) I understand that my participation in this study is voluntary and that I am free to withdraw from the study at any time, without giving any reason and legal rights being affected.
b) I understand that my identity will not be revealed in any document or publication.
c) I agree not to restrict the use/publication of any data or results that arise from this study provided such use is only for scientific purposes.
d) I am aware that by agreeing to my participation in this investigation, I will have to give more time for training and assessments by the investigating team and

that these assessments will not interfere with the benefits that I am entitled to or my daily routine.

e) I give my consent, voluntarily to take part in this study. I also agree for the investigator to record the observation/interview sessions whenever they are held.

Signature (or thumb impression) of the study participants /Legally Acceptable Representative:

Study participant signature/Thumb impression:----------

Signature/Thumb impression of Witnesses: ----------

Study Investigator's Signature:----------

ANNEXURE-V

The questionnaires consists of two sections

Section A: Socio-demographic data

Section B: Pitts burgs sleep quality index

Section C: EP Worth scale

Section D:Smartphone addiction scale

SECTION –A SOCIODEMOGRAPHIC VARIABLES

1. Age:

a. 18-20years

b. 21-23 years

c. 24-26years

2. Gender:

a) Male

b) Female

3. Marital Status:

a) Married

b) Unmarried.

4. Type of Family:

a) Nuclear family

b) Joint family

5. Education

a) Ist year B.Sc

b) IInd year B.Sc

c) IIIrd year B.Sc

d) IVth year B.Sc

6. Sleep Cycles:

a) One cycle.

b) Two cycle.

c) More than 2 times

6. Hours of Mobile usage.

a) 5 hours

b) 6 hours

c) 7 hours

d) 8hours

7. Hours of sleep.

a) 5 hours

b) 6 hours

c) 7 hours

d) 8 hours.

SECTION B: PITTS BURGS SLEEP QUALITY INDEX.

Instructions: The following questions relate to your usual sleep habits during the past month only. Your answers should indicate the most accurate reply for the majority of days and nights in the past month. Please answer all questions. During the past month,

1. When have you usually gone to bed? ____
2. How long (in minutes) has it taken you to fall asleep each night? _____
3. When have you usually gotten up in the morning? __
4. How many hours of actual sleep do you get at night? (This may be different than the number of hours you spend in bed) _____

5. During the past month, how often have you had trouble sleeping because you…	Not during the past month (0)	Less than once a week (1)	Once or twice a week (2)	Three or more times week (3)
a. Cannot get to sleep within 30 minutes				
b. Wake up in the middle of the night or early morning				
c. Have to get up to use the bathroom				
d. Cannot breathe comfortably				
e. Cough or snore loudly				
f. Feel too cold				
g. Feel too hot				
h. Have bad dreams				
i. Have pain				
j. Other reason(s), please describe, including how often you have had trouble sleeping because of this reason(s):				
6. During the past month, how often have you taken medicine (prescribed or "over the counter") to help you sleep?				
7. During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity?				
8. During the past month, how much of a problem has it been for you to keep up enthusiasm to get things done?				

	Very good (0)	Fairly good (1)	Fairly bad (2)	Very bad (3)
9. During the past month, how would you rate your sleep quality overall?				

Component 1 #9 score----------C1

Component 2 #2 score (□15min=0; 16-30 min=1; 31-60 min=2, >60 min=3) + #5a Score

(if sum is equal 0=0; 1-2=1; 3-4=2; 5-6=3)---------- C2

Component 3 #4 score (>7=0; 6-7=1; 5-6=2; <5=3)----------C3

Component 4 (total # of hours asleep)/(total # of hours in bed) x 100

>85%=0, 75%-84%=1, 65%-74%=2, <65%=3----------C4

Component 5 Sum of Scores #5b to #5j (0=0; 1-9=1; 10-18=2; 19-27=3)--C5

Component 6 #6 score---------- C6

Component 7 #7 score + #8 score (0=0; 1-2=1; 3-4=2; 5-6=3)----------C7

SECTION C: EP WORTH SCALE

EP worth Sleepiness Scale This scale is used to determine a person's level of daytime sleepiness. In the following situations, what is your likelihood of falling asleep or dozing?

Answer using this scale:

0 = would never doze or sleep

1 = slight chance of dozing or sleeping

2 = moderate chance of dozing or sleeping

3 = high chance of dozing or sleeping

Situation	Chance of dozing or sleeping
Sitting and reading	
Watching TV	
Sitting inactive in a public place	
Being a passenger in a car for an hour	
Lying down in the afternoon	
Sitting and talking to someone	
Stopping for a few minutes in traffic while driving	
Total Epworth score	

What was your score?

0-6: You are getting sufficient sleep.

7-9: An average score; you are occasionally sleepy during the day.

10 or higher: You are not getting sufficient sleep.

SECTION D:SMARTPHONE ADDICTION SCALE

Sl.no	Items	Strongly disagree	Disagree	Weakly disagree	Weakly agree	Agree	Strongly agree
1.	Missing planned work due to smartphone use	1	2	3	4	5	6
2	Having a hard time concentrating in class, while doing assignments, or while working due to smartphone use	1	2	3	4	5	6
3	Feeling pain in the wrists or at the back of the neck while using a smartphone	1	2	3	4	5	6
4	Will not be able to stand not having a smartphone	1	2	3	4	5	6
5	Feeling impatient and fretful when I am not holding my smartphone	1	2	3	4	5	6
6	Having my smartphone in my mind even when I am not using it	1	2	3	4	5	6
7	I will never give up using my smartphone even when my daily life is already greatly affected by it	1	2	3	4	5	6

8	Constantly checking my smartphone so as not to miss conversations between other people on Twitter or Facebook	1	2	3	4	5	6
9	Using my smartphone longer than I had intended	1	2	3	4	5	6
10	The people around me tell me that I use my smartphone too much	1	2	3	4	5	6

Interpretation of scale :Items: 10

Scoring: 6-point Likert scale (1-6)

- Low addiction: 10-29

- Moderate addiction: 30-44

- High addiction: 45-60

ANNEXURE-VI

MASTER DATA SHEET

A. SOCIO-DEMOGRAPHIC DATA

sl.no	AGE	GENDER	MARITAL STATUES	EDUCATION	TYPE OF FAMILY	SLEEP CYCLES	MOBILE USEAGE	HOURS OF SLEEP
1	a	b	e	b	a	b	b	b
2	b	b	b	b	a	a	b	b
3	a	b	b	b	a	c	d	c
4	a	b	e	b	a	b	b	b
5	a	b	e	b	a	b	b	a
6	a	b	e	b	a	a	a	b
7	a	b	e	b	b	a	a	d
8	a	b	e	b	a	b	b	d
9	a	b	e	b	a	a	b	b
10	a	b	e	b	a	a	b	b
11	a	b	e	b	a	a	b	b
12	a	b	e	b	a	a	b	c

13	a	b	e	b	b	a	b	b
14	a	b	e	b	b	a	b	b
15	a	b	e	b	a	a	a	c
16	a	b	e	b	b	a	a	c
17	a	b	e	b	b	a	a	d
18	a	b	e	b	a	a	a	c
19	a	b	e	b	a	b	a	d
20	b	a	b	b	a	a	a	b
21	a	b	e	b	b	c	b	c
22	a	b	e	b	a	b	b	c
23	a	b	e	b	a	a	b	c
24	a	b	e	b	b	b	b	c
25	a	a	b	b	a	b	b	c
26	a	b	e	a	a	a	a	b
27	a	b	e	a	a	a	a	b
28	a	b	e	a	a	c	c	c
29	a	b	e	a	a	a	b	b
30	a	b	e	a	a	a	a	b

31	a	b	b	a	a	a	a	d
32	a	b	e	a	a	a	a	c
33	a	b	e	a	a	a	b	b
34	a	b	e	a	a	b	c	c
35	a	b	e	a	a	a	a	b
36	a	b	e	a	a	a	a	b
37	a	b	e	a	a	a	a	c
38	a	b	e	a	a	a	a	b
39	a	b	e	a	a	a	a	b
40	a	b	e	a	a	a	a	a
41	b	b	b	a	a	a	a	c
42	a	b	e	a	a	a	c	a
43	a	b	e	a	a	b	b	c
44	a	b	e	a	a	a	b	b
45	a	b	e	a	a	a	a	c
46	a	b	e	a	a	a	a	b
47	a	b	e	a	b	b	d	d
48	a	b	e	a	a	a	b	b

49	a	b	e	a	a	b	b	b
50	a	b	e	a	a	b	a	d
51	a	b	e	c	b	a	c	b
52	b	b	b	c	a	a	a	b
53	b	b	b	c	a	a	d	c
54	b	b	b	c	a	c	a	d
55	b	b	b	c	a	b	c	c
56	b	b	b	c	a	a	a	c
57	b	b	b	c	a	a	a	c
58	b	b	b	c	a	a	c	d
59	b	b	b	c	a	a	a	d
60	a	b	e	c	b	a	c	d
61	b	b	b	c	a	a	a	c
62	b	b	b	c	a	a	d	d
63	b	b	b	c	a	a	a	c
64	b	b	b	c	b	a	b	b
65	b	b	b	c	a	a	b	b
66	b	b	b	c	a	a	a	c

67	b	b	b	c	a	a	a	b
68	b	b	b	c	b	a	a	b
69	b	b	b	c	b	a	a	b
70	a	b	e	c	a	a	a	b
71	b	b	b	c	a	a	b	b
72	b	b	b	c	a	a	b	b
73	b	b	b	c	a	a	a	b
74	b	b	b	c	a	a	a	b
75	b	b	b	c	a	a	b	b
76	b	b	b	d	a	b	b	c
77	b	b	b	d	b	a	b	c
78	b	b	b	d	b	b	c	c
79	b	b	b	d	a	a	d	a
80	b	b	b	d	a	a	b	d
81	b	b	b	d	a	b	c	d
82	b	b	b	d	b	a	b	c
83	b	b	b	d	a	a	c	c
84	b	b	b	d	a	a	c	c

85	b	b	b	d	b	c	a	d
86	b	b	b	d	a	c	a	b
87	b	b	b	d	a	b	c	a
88	b	b	b	d	c	a	a	b
89	b	b	b	d	c	a	b	c
90	b	b	b	d	a	a	a	c
91	b	b	b	d	a	a	b	c
92	b	b	b	d	a	a	b	c
93	b	b	b	d	b	a	b	c
94	b	b	b	d	a	a	b	b
95	b	b	b	d	a	a	a	b
96	b	b	b	d	a	b	a	b
97	b	b	b	d	a	b	a	c
98	b	b	b	d	a	b	a	c
99	b	b	b	d	a	a	a	b
100	b	b	b	d	a	a	b	b

(B)PITTS BURG SLEEP QUALITY INDEX SCORES

sl.no	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
1	1	1	1	1	1	1	0	1	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	3	0	0	0	0	0	3	0	0	0	0	1
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1	2	0	0	1	1	1	3	2	0	1	0	1
6	3	3	0	0	0	1	0	1	2	0	3	0	1
7	0	3	3	0	1	1	0	0	2	3	1	1	2
8	0	0	0	0	0	1	1	1	0	0	0	1	0
9	2	3	3	0	0	0	2	0	0	0	0	0	0
10	2	3	3	0	0	0	0	2	0	0	0	0	1
11	2	3	3	0	0	0	0	2	2	0	0	0	1
12	2	3	3	0	0	0	0	2	2	0	0	0	1
13	2	0	0	0	0	1	0	1	0	0	0	0	0
14	2	0	0	0	0	1	2	1	0	0	0	0	1
15	2	0	0	0	0	1	0	0	0	0	0	0	0
16	0	0	0	0	0	1	0	0	0	0	0	0	1

17	2	0	0	0	0	2	1	0	0	0	0	0	0
18	0	3	3	0	0	1	0	0	0	0	0	0	1
19	2	3	0	0	0	1	0	1	0	0	0	0	1
20	3	0	1	0	0	0	0	0	0	0	0	0	1
21	1	1	0	1	0	1	0	1	0	0	0	1	2
22	2	0	2	0	0	1	2	2	0	0	0	1	1
23	0	0	0	0	0	1	1	0	0	0	0	1	0
24	0	0	2	0	0	1	0	2	0	0	0	1	1
25	1	2	2	0	0	0	0	0	0	0	0	0	1
26	0	1	0	2	1	1	0	0	0	0	0	0	1
27	0	0	0	1	1	1	0	0	0	0	0	0	1
28	0	0	1	1	0	2	0	0	0	0	0	0	1
29	0	0	1	1	0	2	0	0	0	0	0	0	1
30	0	2	1	0	0	0	0	0	0	0	0	1	1
31	0	2	1	0	0	0	0	0	0	0	0	1	1
32	0	1	1	0	0	0	0	0	1	0	3	2	0
33	0	0	1	0	0	1	0	2	1	0	3	2	0
34	0	2	0	0	0	0	0	0	0	0	0	0	0

35	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	1	0	0	0	1	1	0	0	0	0	1	1
37	0	1	0	0	0	0	0	0	1	1	0	0	1
38	0	1	0	0	0	1	1	0	0	0	0	1	1
39	0	1	2	0	0	0	1	1	2	0	0	0	2
40	1	3	1	0	0	0	0	1	1	0	0	0	1
41	0	0	0	0	0	2	2	0	0	0	0	0	0
42	2	0	0	0	2	2	0	3	0	0	0	2	0
43	0	0	0	0	0	2	2	2	3	3	1	2	0
44	3	1	1	2	0	1	1	3	0	0	1	0	1
45	2	0	0	0	0	1	0	0	0	0	0	0	0
46	2	0	0	0	0	1	0	0	0	0	0	0	0
47	1	1	1	0	0	1	2	0	0	0	0	1	2
48	1	3	1	0	0	0	0	1	2	0	0	0	1
49	1	2	0	0	0	0	0	0	0	2	2	1	0
50	1	2	0	0	0	0	0	2	0	0	1	0	1
51	3	0	1	0	0	0	0	0	0	0	0	0	1
52	2	1	1	0	0	2	2	1	0	0	0	2	1

53	2	1	0	3	0	2	2	1	0	0	2	1	1
54	2	1	0	0	1	2	0	2	1	3	0	1	2
55	2	1	0	0	1	1	0	2	0	1	2	0	1
56	0	1	0	0	0	1	0	1	0	0	1	1	0
57	0	1	0	0	0	0	0	1	0	0	0	1	0
58	2	1	0	3	0	2	2	3	1	3	0	2	0
59	0	3	0	0	0	0	0	1	0	0	1	0	2
60	2	3	0	0	0	3	2	3	2	0	1	2	1
61	1	1	2	3	1	0	0	0	2	2	1	1	1
62	0	1	0	0	2	1	0	2	0	0	3	2	0
63	0	1	0	0	2	1	0	1	0	0	2	1	0
64	0	2	2	0	0	0	0	1	0	0	0	0	0
65	0	2	0	2	0	0	0	1	0	0	0	0	0
66	0	0	3	0	0	0	0	0	0	2	0	0	0
67	1	0	0	0	0	1	0	1	0	0	0	0	0
68	0	1	1	0	0	0	1	1	0	0	0	1	0
69	0	0	0	0	0	0	1	1	0	0	0	1	0
70	0	1	0	0	0	0	1	1	0	0	1	1	0

71	0	2	1	0	0	1	1	1	1	0	0	0	1
72	1	2	1	0	0	1	1	0	1	0	0	0	0
73	1	2	1	1	0	1	0	0	0	0	0	0	1
74	1	2	0	0	0	2	1	1	0	0	0	0	1
75	0	2	1	0	0	1	1	0	0	0	0	0	0
76	3	3	2	3	1	2	0	2	3	3	3	2	3
77	0	1	0	0	1	1	0	1	1	1	1	1	0
78	0	1	0	0	1	1	0	1	1	1	1	1	1
79	1	0	0	0	1	0	0	0	0	0	0	0	1
80	0	3	0	0	0	0	0		0	0	0	0	0
81	0	1	1	0	0	1	1	2	0	0	0	0	0
82	0	0	0	0	0	0	0	0	0	0	0	0	0
83	0	0	0	0	0	0	0	0	0	0	0	0	0
84	0	0	0	0	0	0	0	0	0	0	0	0	0
85	0	3	0	1	0	1	0	0	1	1	0	0	0
86	0	1	2	1	2	1	2	1	1	1	2	1	1
87	0	1	0	1	0	1	0	1	0	1	0	1	0
88	0	2	0	0	0	0	0	0	0	0	0	0	0

89	0	1	1	0	0	0	0	0	0	0	0	0	0
90	1	1	0	0	0	1	1	1	0	0	0	0	0
91	3	1	1	0	0	0	0	2	1	0	0	0	0
92	0	1	0	0	0	1	0	0	0	0	0	0	1
93	0	1	0	0	0	1	0	0	0	0	0	0	1
94	3	2	1	3	0	2	1	1	1	0	0	0	1
95	0	0	1	1	1	1	0	0	2	1	0	0	1
96	0	0	0	0	0	0	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0	0	0	0	0
99	0	0	1	0	0	1	0	1	0	0	0	0	1
100	0	0	1	1	0	1	0	1	0	0	0	1	0

Section C: EP Worth scale

SL.NO	SITTING ,READING	WATCHING T.V	INACTIVE IN PUBLIC PLACE	PASSENGER IN CAR	LYING AFTERNOON	TALKING TO SOME ONE	STOPPING IN TRAFFIC
1	2	1	1	3	2	0	0
2	1	0	0	1	2	0	0
3	1	0	0	0	2	0	0
4	0	0	0	1	2	0	0
5	0	0	0	1	2	1	0
6	2	3	1	3	3	3	2
7	2	1	0	2	0	0	0
8	3	1	0	2	3	3	3
9	2	1	0	0	1	2	0
10	2	0	0	3	3	0	0
11	2	0	2	1	2	0	0
12	2	0	2	1	1	0	0
13	2	0	0	2	3	0	0
14	0	0	3	3	3	2	0

15	1	1	0	2	3	0	0
16	2	3	0	3	3	0	0
17	2	0	0	0	3	0	0
18	1	1	0	2	3	0	0
19	2	0	3	3	3	2	0
20	0	2	2	3	1	2	2
21	3	1	0	0	3	0	0
22	2	1	2	3	3	1	1
23	2	1	0	0	1	1	0
24	1	0	0	1	1	0	0
25	3	2	2	2	2	3	3
26	0	1	0	0	0	1	0
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
31	1	1	2	1	2	3	1
32	1	1	2	1	2	3	1

33	0	0	0	0	0	0	1
34	2	2	0	1	2	0	2
35	0	0	0	0	3	2	0
36	3	0	0	3	0	3	3
37	1	0	1	0	0	1	1
38	0	1	0	0	0	0	0
39	1	0	0	1	1	0	0
40	1	0	0	3	3	0	0
41	3	0	0	0	0	1	0
42	3	0	0	1	1	0	0
43	1	0	0	2	2	0	0
44	2	0	0	3	2	0	0
45	0	1	0	0	1	0	0
46	1	0	0	1	1	0	0
47	2	1	0	1	1	0	0
48	1	0	0	3	3	0	0
49	1	2	0	0	2	1	1
50	2	2	2	0	3	0	0

51	0	1	0	0	2	1	0
52	2	0	1	2	2	2	2
53	2	0	1	2	2	3	2
54	2	1	0	3	2	0	0
55	2	1	0	3	3	0	1
56	1	1	0	0	1	2	0
57	1	1	0	0	1	1	0
58	2	1	0	0	1	2	2
59	2	0	2	3	1	0	0
60	2	0	3	3	3	0	1
61	2	2	2	2	3	1	0
62	2	1	2	3	0	3	2
63	0	0	0	1	3	0	0
64	2	2	0	2	3	0	0
65	2	0	0	0	2	0	0
66	2	1	3	1	3	0	0
67	1	0	0	3	3	0	0
68	2	1	3	3	3	0	1

69	2	1	0	1	1	0	0
70	2	1	0	1	1	0	0
71	2	0	2	3	3	0	1
72	2	0	2	3	3	0	0
73	2	1	3	2	3	0	0
74	2	2	3	1	2	2	0
75	2	0	2	3	3	0	1
76	1	1	0	0	1	0	0
77	1	1	0	1	3	2	1
78	1	1	0	1	3	2	1
79	1	1	1	1	2	2	0
80	1	2	0	0	2	3	0
81	1	2	0	0	1	0	0
82	2	1	0	0	0	1	0
83	0	0	0	0	0	0	0
84	1	0	0	0	0	0	0
85	3	1	0	1	3	1	0
86	1	3	0	2	3	0	2

87	3	2	1	3	3	3	0
88	3	1	2	3	3	0	2
89	3	2	3	0	3	3	1
90	3	1	2	3	3	2	2
91	2	0	0	0	1	0	0
92	3	0	2	2	2	3	0
93	3	0	2	2	2	3	0
94	2	0	0	0	1	2	1
95	2	1	2	0	3	2	1
96	3	1	0	3	3	2	1
97	3	1	0	3	3	1	1
98	3	1	2	3	3	1	2
99	2	0	1	0	0	3	0
100	1	1	1	2	1	3	0

SECTION D: SMARTPHONE ADDICTION SCALE

sl.no	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	2	2	2	1	2	2	2	2	2	2
2	2	2	2	1	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2
5	2	1	1	2	2	2	2	2	2	2
6	2	3	2	1	1	2	1	3	3	2
7	4	5	6	2	5	6	6	4	1	1
8	4	5	6	2	5	6	6	4	1	1
9	2	1	1	1	1	1	1	1	1	1
10	1	1	2	1	1	2	2	2	1	2
11	1	2	1	1	1	2	1	1	2	1
12	1	2	1	1	1	2	1	1	2	1
13	1	1	2	3	1	1	1	2	2	1
14	1	1	2	1	1	2	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1
16	2	2	1	5	1	2	1	1	2	2

17	2	2	2	1	1	1	2	2	1	1
18	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1
20	2	3	1	1	1	1	1	1	2	1
21	4	2	2	6	2	2	2	2	5	6
22	2	1	4	1	1	1	1	2	2	1
23	1	1	1	1	1	1	1	1	1	1
24	5	2	2	1	2	1	1	2	4	1
25	5	4	5	4	5	6	4	6	4	5
26	2	2	2	5	6	2	2	2	2	2
27	1	2	3	4	4	2	3	4	2	5
28	1	2	2	2	2	1	1	5	2	2
29	2	2	1	1	1	1	1	2	2	1
30	2	2	1	1	1	1	1	2	2	1
31	5	2	2	2	2	2	2	2	5	2
32	5	2	2	2	2	2	2	2	5	2
33	2	1	1	2	2	5	3	4	6	6
34	1	2	3	4	4	2	3	4	2	5

35	1	1	1	2	1	1	1	5	6	6
36	1	1	1	1	2	1	1	4	6	1
37	1	2	4	1	1	1	2	3	1	4
38	1	2	4	1	1	1	1	2	2	3
39	2	2	4	6	1	2	1	1	2	1
40	5	2	2	2	2	5	2	2	5	5
41	5	1	4	2	2	2	1	2	3	2
42	2	2	4	1	1	1	1	4	5	5
43	2	2	1	2	2	2	3	3	4	4
44	2	3	4	2	1	1	2	3	5	4
45	1	1	5	1	1	1	1	1	4	3
46	2	2	4	6	1	2	1	1	2	1
47	4	4	6	3	6	2	3	2	2	5
48	2	2	2	2	2	5	2	2	5	5
49	5	1	4	2	2	2	1	2	3	2
50	4	3	2	3	4	1	4	5	5	4
51	3	4	2	2	5	5	4	6	4	5
52	4	3	5	2	2	3	3	2	4	3

53	5	4	6	4	4	3	3	3	4	3
54	4	5	4	2	2	2	3	2	1	5
55	5	5	1	2	3	5	5	2	2	1
56	4	2	4	6	2	2	2	2	2	2
57	4	5	4	3	3	2	2	2	2	2
58	1	2	2	2	1	5	2	3	2	4
59	1	2	1	3	2	4	3	1	2	2
60	1	2	5	4	4	5	5	4	3	2
61	1	2	3	5	4	4	4	3	3	2
62	6	5	2	2	3	1	2	1	4	5
63	6	5	2	2	3	1	2	1	4	5
64	4	1	5	4	2	1	2	5	4	1
65	4	1	5	4	2	1	2	5	4	1
66	4	2	5	1	4	1	2	5	4	1
67	2	1	5	2	1	1	2	4	5	3
68	1	2	5	3	1	1	2	5	5	4
69	1	2	5	3	1	1	2	5	5	4
70	4	1	5	4	1	1	2	5	5	4

71	1	2	1	2	1	1	1	2	1	1
72	1	2	1	2	1	1	1	2	1	1
73	2	3	5	2	2	5	2	4	5	2
74	2	3	5	2	2	4	2	4	5	2
75	1	2	1	2	1	1	1	2	1	1
76	4	2	4	3	3	5	4	1	3	6
77	4	2	2	1	2	2	2	3	3	2
78	4	2	1	2	2	2	2	3	3	2
79	2	2	2	2	2	1	2	4	3	1
80	4	2	2	2	2	2	2	4	2	1
81	4	3	4	2	1	2	2	2	5	3
82	1	1	1	1	1	1	1	1	1	1
83	2	2	3	2	2	2	2	2	2	2
84	2	2	1	2	1	1	1	1	1	1
85	1	4	1	4	2	1	2	2	1	2
86	4	2	3	1	3	1	2	2	2	2
87	1	3	1	2	1	3	1	2	1	2
88	1	6	3	1	2	1	1	1	2	2

89	2	1	1	1	1	1	2	1	1	1
90	1	1	1	1	1	1	2	2	2	2
91	3	1	1	3	1	1	1	1	3	1
92	4	3	2	5	2	2	2	2	3	2
93	4	3	2	5	2	2	2	2	3	2
94	4	2	1	2	1	3	4	4	4	2
95	2	6	1	1	2	2	6	6	6	6
96	3	2	4	1	1	2	2	2	2	2
97	3	2	4	1	1	2	2	2	2	2
98	3	2	4	1	1	2	2	2	2	2
99	4	2	2	2	1	4	2	4	6	4
100	5	4	4	3	3	2	2	2	3	2

ANNEXURE-VII

CERTIFICATE OF PLAGIARISM CHECK

Sri Devaraj Urs College of Nursing

Certificate of Plagiarism Check for Project

Title of the Project	A STUDY TO ASSESS SMARTPHONE ADDICTION, SLEEPQUALITY, AND DAYTIMESLEEPINESS AMONG NURSINGSTUDENTS IN SELECTED COLLEGES KOLAR
Author Name	Ms. Nandini M
Course of study	M.Sc.(N)
Registration Number	23NS301
Name of the Supervisor / Guide	Prof. Jairakini Aruna
Department	Mental Health Nursing
Acceptable Maximum Limit (%) of Similarity (PG Dissertation /Ph.D. Thesis)	10%
Similarity	4%
Software used	Turnitin
Paper ID	2667793150
Submission Date	08-May-2025 12:02PM

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Head of the Department

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