



“A Study To Assess Knowledge Regarding The Impact Of Mobile Phone On Exam Performance Among Junior Colleges Students In Selected College Of Nagpur City.”

Ms.Kalyani Diliprao Pahade, Ms.Divyashree Arvind Rangari, Ms.Pratiksha dilip pakhare,Ms.Ashwini Anil khandare

¹Clinical Instructor,²Clinical Instructor ,³Clinical Instructor ⁴Clinical Instructor

¹OBGY Dept, ²MHN Dept, ³FON Dept,⁴ MHN Dept.

Dr.Panjabrao Deshmukh Nursing Institute ,Amravati.

Abstract: - A STUDY TO ASSESS KNOWLEDGE REGARDING THE IMPACT OF MOBILE PHONE ON EXAM PERFORMANCE AMONG JUNIOR COLLEGES STUDENTS IN SELECTED COLLEGE OF NAGPUR CITY.”

Introduction:

In recent years, Mobile telecommunication systems have grown significantly and Mobile Phones have become an essential part of daily life and are very popular among every age group. Mobile phone virtually affected the society's accessibility, security, safety social activities.

These days students of junior college use expensive and sophisticated Mobile. The rampant use of social networking, texting and chatting on Mobile Phones result in lower grades in exam and poor academic performance of students.

The spread of mobile phone is affecting people lives and relationship and also affects how people interact face to face Impact of higher education / learning globally influenced at large with advance in information technology (emadet al 2015) but so far while it has brought about some problem and threats stemming from irresponsible use of smart phones among teens young adult.

Mobile phone addiction has negative impact on student learning and overall academic performance the greater the negative impact on learning skill and cognitive abilities of students needed for academic success are negatively affected by excessive phone use

Mobile phone is a device which has affected our social contacts, education system, safety, business activities and many other aspects of life (Ling, 2003). It is one of those consumers' goods which created its market very rapidly and replaced other forms of communications. Being widely used around the world equally by rich and poor, it was formally introduced in Pakistan in early 1990s and was taken as status symbol but it is now a dire need of majority.

Mobile phone is a device which has affected our social contacts, education system, safety, and many other aspects of life . It is one of those consumers' goods which created its market very rapidly and replaced other forms of communications Being widely used around the world equally by rich and poor. Students have an upper hand when they have the convenience of the mobile device, not just for the online lectures they can also use it for entertainment purposes like movies, games, social media, etc.

Due to the increase in the number of mobile phone users in the younger generation, companies have started to develop their mobile version in the form of an application that is more user friendly and lets people stick to the app longer increasing the media used for the students.

Mobile phones are both a curse and a boon to the newer generation as a lot of these phones when being used for education and entertainment purposes, also influences a lot of ill habits in the younger generation like watching pornography, blackmailing others for their good, increase in cybercrime, etc.

Background study:

Globalization has changed our lives. Information and communication Technologies (ICT) seeing rapid advancement in mobile phone. Mobile phone is popular since the late 1990s and today with billion mobile connection worldwide and unique mobile subscriptions of our 3.5 billion they are very popular in students of junior college.

Teachers are more concerned about issues of mobile phone during examination. According to majority of research done it was discovered that use of mobile phone in colleges at time of examination is destructive. In past fixed telephones where norms in schools their were minimum distraction and disruption but presently with invasion of mobile phone and eagerness of parents to contact with their word the devices is becoming invasive in lives of students.

A survey was carried in 1st April to 1st of July 2017. Data analysis by using the mini-tab version 18. Result about 66% of students were female. The overall prevalence of mobile addiction was 60% in studying students (35.37% among male and 64.63% among female) with large increase in both sexes less or equal twenty years (59.21%). Conclusion overall female had more effects of mobile phone usage as compared to male.

Need of study:

In today fast moving and globalised world it is almost impossible to imagine our day to day life without mobile phone. Now a days due to excessive use of mobile phone it shows influence on health of students. Poor vision: The constant usage of mobile phones affects vision. Students suffers through different problems related to eye. Ex. Redness, blurry vision, burning sensation and even low eye sight. Disturbed sleep: Student have heavy load of responsibilities regarding their studies besides their hours at college they start wasting their precious time on mobile and at last they sacrifice their sleep. Lack of focus: The fully fantasized world of Internet and smart-phones distract Focus of student from studies. Other than that, lack of sleep also plays vital role in distracting their focus. They lack concentration. Tension and anxiety: "The light ray emitted from mobile screen affects eyes. Beside this they direct cause headache. Also overburdening of brain by constantly playing games and using application cause migraines.

According to modern research the most menacing problem is connecting of mobile phone with cancer. It is reported that people who talk on phone for several hours a day are 50% more likely to have brain cancer the reason for this is radio wave emitting from mobile phones.

1) PROBLEM STATEMENT

“A study to assess knowledge regarding the impact of mobile phone on exam performance among junior colleges students in selected college of Nagpur city.”

2) OBJECTIVE

- 1) To assess the impact of mobile phone on exam performance among junior college students.
- 2) To find the association between knowledge on impact of mobile on exam performance among junior college students and selected demographic variables.

3) OPERATIONAL DEFINITION**Assess :**

According to oxford dictionary," Evaluate or Estimate the Nature, ability, or quality of.

In this study,"It Refer to evaluate impact of mobile phone on Student Exam performance coming Junior Colleges student"

1. Impact

According to oxford dictionary" The power effect that something has on somebody / something."

In this study," It refers to effect of mobile phone on exam performance among junior college students.

2. Mobile phone :

According to oxford Dictionary," A Telephone that you can Carry around with you."

In this research study, “It refers to electronic device carried by junior students around them.”

3. Student :

According to oxford dictionary, "A person who is studying at a College or university.

In this research study, “It refers to person of 17-20 years of age who are studying at junior college.”

4. Junior College:

According to Oxford dictionary,” College offering Courses for two years beyond High School.”

In this research study”It refers to educational institute for student offering 11-12th study course.

5. Exam performance:

According to oxford dictionary”, The act of examining or state of being examined.

In this study,” It refers to act of examining among junior college students.

4) SCOPE OF STUDY:

Research on the topic of cell phones has proliferated over the past decade. particularly in scholarly publications. Thus it would of interest to examine the scope and extent of research emphasis on the topic.

- ❖ This study illustrate specific research trends on the topic of cell phones within various areas in the psychological and behavioural sciences.
- ❖ Research on cell phones was found to be well-represented in the human factors literature.
- ❖ Research on cell phones continues, perhaps individual differences and prediction modelling will attract people attention which should advance our knowledge on how to assess the negative impact of cell phone use.

5)ASSUMPTION

The junior colleges may have little knowledge regarding impact of mobile phone on student exam performance.

6) LIMITATION

Study will be limited to 100 students.

Study will be limited to student of junior colleges.

7) ETHICAL CONSIDERATION

Chapter 2

Review of literature

Introduction :

review of literature is one of the most important steps in the research process. It is an account of what is already known about particular phenomenon. The main purpose of literature review already done and the knowledge and idea that have been already established on a particular topic of research. A literature review is an account of the previous effort and achievement of scholars and researcher on a phenomenon. Actually it is a piece of discursive prose and not a list describing or summarizing one piece of literature after another.

Before starting any research a literature review of previous study and experiences related to proposed investigation has to be done. One of the most satisfied aspect of literature review is in the contribution it make to the new knowledge, insight, and general scholarship of the researches.

A review of literature is a description and analysis of the literature relevant to particular field or topic. It provides overview of what work already had been carried out, who are the key researcher who did that work which of the question are already answered regarding a particular area of research interest, what method and methodologies where used to answer the particular question and what are the prevailing theory and hypotheses.

Literature review is defined as "A broad, comprehensive, in depth, systematic, and critical review of scholarly publication, unpublished printed or audio visual material and personal communication.

- 1) This study carried out by Ahmad Osalian. In this study observational method was used. Problem statement : In relationship between smartphone usage duration with hand- grip and pinch-grip strength among young people. This study was conducted in physical therapy and health rehabilitation college of medical science . this study was publish in 15 february2021. objective : to investigate association between smartphone usage duration and hand-grip pinch -grip strength. result: mean daily usage of smart phone among participants was 7.8 ± 2.2 there was weak significant inverse relation between smartphone usage duration and hand- grip strength ($r= -.22$, $p=.03$) and pinch -grip strength ($r=.28$, $p=.004$). conclusion: prolonged use of smartphone was related to weaker hand – grip and pinch - grip despite weak relationship realationship study showed that smartphone usage duration might contribute as factor along with to hand muscle strength.
- 2) .This study carried out by po- yu wang, kai li chen and shang –yu yang in this study cross sectional research approach was used Problem statement : Relationship of sleep quality , smartphone dependence and health related behaviour in female junior college students . This study was conducted in Department of health beauty, Shu Zen Junior College of Medicine and Mangement, Kaohsiung, Taiwan. This study was publish in 3 april 2019. Objective: To investigate relationship between female college students sleep quality smartphone dependence and health related behaviour and to identifying prediction of sleep. Result :sleep quality was significantly associated with degree of smart dependence total HPLP score and score on four HPLP subscale of nutritional behaviour , Self actualization ,Interpersonal support and stress management behaviour . conclusion : smartphone dependence is associated with poor quality among female college students improving health related behaviours can also promote improvement in sleep quantity.
- 3) .This study carried out by po yu Wang, kai li chen, Jing Qi. In this study preliminary study was used. Problem statement : smartphone use and sleep quality in chinese college students. This study was conducted in college of changshachina. This study was published on may 6 2020. Objectives : To examine associations of poor sleep quality with smartphone use Result : The result showed that prevalence of poor sleep quality in chinese college student was 9.8 %. In multiple logistic regression analysis, poor sleep quality was significantly associated with male gender (OR:2.80, p: 0.022), not

having good physical health (OR 2.01, P:0.020) headache(OR:2047,P : 0.0014) ,greater than 5 hours of daily smartphone use (OR:2.19, P: 0.049) and more severe inability to control MPA (OR : 2.04, P:0.040) Conclusion : Finding suggest that excessive smartphone use and MPA are associated with poor sleep quality in sample of chinese college, students health vocational college. Because of limited sample representation and cross sectional design of this study, large scale prospective representative studies are warranted to confirm these associations.

4) This study carried out by Sara Thomee .In this study quantitative analysis was used. Problem statement: Mobile phone use and mental health: A review of research that takes a psychological perspective on exposure. This study was published on Nov 29 2018.Objective: To analyses mobile phone use in relation to mental health outcomes and other psychological factor Technique - cross sectional design . Result – The identified studies (n=290) mains dealt with frequency or duration of mobile Phone use in relation of mental health symptom (such as depression anxiety and insomnia mobile phone user and sleep habits and problematics mobile phone use. Conclusion : Association between mobile phone use and adverse mental health outcomes are found in studies that take a psychological behavioural perspective on the exposure , however, more study of high quality are needed with longitudinal design , objective and measurement and we'll define study population in order to draw valid conclusion about mechanism and direction of association.

5) This study carried out by ke lei Guo, Shu jun Yao, Qi shuai Ma, Juan Jiang. In this study Bootstrap method was used Problem statement : The relationship between physical exercise and mobile phone addictiontendenc of university students in China. The stud was conducted in liberal arts university and comprehensive universities in central China. Study was published in february 2022 Objectives : To explore relationship between physical exercise, self control, physical atmosphereand mobile phone addiction tendency among chinese university students. Result : PE and MPAT were negatively related ($r = -0.158$, $p < 0.05$); PE significantly positively predicted SC ($\beta = 0.082$, $t = 3.748$, $p < 0.01$), and SC significantly negatively predicted MPAT ($\beta = -0.743$, $t = -19.929$, $p < 0.01$).Bootstrap method was used to test the mediating effect of SC. The results showed that 95% confidence interval did not include 0. After adding the mediating variable of SC, PE did not significantly negatively predict the tendency of MPAT ($\beta = -0.027$, $t = -1.257$, $p > 0.05$). The interaction item PEA and SC could significantly positively predict the tendency of MPAT ($\beta = 0.165$, $t = 2.545$, $p < 0.05$). In the high PEA group, SC had a significant negative predictive effect on the tendency of MPAT ($\beta = -0.665$, $t = -14.408$, $p < 0.01$); However, in the low PEA group, the negative predictive effect was stronger ($\beta = -0.834$, $t = -15.015$, $p < 0.01$).Conclusion : 1. PE has a significant negative predictivd effect on university students MPAT 2. SC plays complete mediating role in relationship between PE and college students's MPAT 3. PEA miderates relationship between Sc and MPATamong university students

6) This study was carried out by Zhou Bo, Meifen wang, Yin Hong and Shan Xu. In this study Bibliometric method is used. Problem statement : Analysis and Prospect of Research on Mobile Phone Addiction.This study was published in 6 May 2022.Objectives : To analyze core literature data related to study of mobile phone addiction in web of science database. Result : First of all, in terms of the time of issuing the document, the research on mobile phone addiction started earlier, and the research on mobile phone addiction appeared in 2008; Secondly, from the changing trend of articles, the number of articles on mobile phone addiction was small in 2015 and before, and the

number of articles has been hovering between 50. However, since 2016, the number of articles on mobile phone addiction began to increase, and the research showed a steep increase. At present, research is on the rise, and mobile phone addiction has become a hot research topic. Conclusion : The research uses CiteSpace software to visually analyze mobile phone addiction, and discusses the research distribution, research hotspots and research frontiers. The results show that: (1) the research of mobile phone addiction is in the rising area of research; (2) The breadth and depth of research on mobile phone addiction, especially the lack of cooperation on mobile phone addiction; (3) The research on mobile phone addiction mainly focuses on college students and teenagers, focuses on the causes, influencing factors and internal mechanism of mobile phone addiction, and is also committed to continuously improving the existing measurement tools. (4) "Risk", "behavioral", "addition", "mediating role" and "problematic" mobile phone use are all cutting edge topics of current research.

- 7) This study was carried out by Lu Li, Grace K.I. Lok, song Li Mei, Juan Zhang, freng Rong An. In this study cross sectional method is used. Problem statement : The severity of mobile phone addiction and its relationship with quality of life in Chinese university students. This study was conducted in Macao, Hong kong and Mainland China and was publishes in 1 june 2020. Objective: This study examined the severity of mobile phone addiction and its relationship with quality of life (QOL) in Chinese university students. Results: Compared to students in mainland China, those in Macao and Hong Kong were more likely to have excessive mobile phone use. Multiple linear regression revealed that high academic pressure and poor academic performance were positively associated, while male gender, greater interest in academic major and long sleep duration were negatively associated with the severity of mobile phone addiction. Students addicted to mobile phone use had significantly lower scores across all QOL domains. Conclusion: Due to the adverse impact of excessive mobile phone use on QOL, public education and effective preventive measures should be developed for Chinese university students.
- 8) This study was carries out by sei you sohn, Lauren Kranoff, Phillipa Rees Nicola kalk. In this study cross sectional method was used . Problem statement : The association between smartphone addiction and sleep ; A uk cross sectional study of young adult. This study was carried out in kings college London and England and was published in 2 March 2021. Objectives : To investigate relation between smartphone addiction and sleep quality in adult population. Results: One thousand seventy one questionnaires were returned, of which 1,043 participants were included, with median age 21.1 [interquartile range (IQR) 19-22]. Seven hundred and sixty three (73.2%) were female, and 406 reported smartphone addiction (38.9%). A large proportion of participants disclosed poor sleep (61.6%), and in those with smartphone addiction, 68.7% had poor sleep quality, compared to 57.1% of those without. Smartphone addiction was associated with poor sleep (aOR 1.41, 95%CI: 1.06-1.87. p=0.018). Conclusions: Using a validated instrument 39% young adults reported smartphone addiction. Smartphone addiction was associated with poor sleep, independent of duration of usage, indicating that length of time should not be used as a proxy for harmful usage.
- 9) This study was carried out by Tobias Kliesener, Christof Meigen, wieland Kless and Tanja Poulain. In this study cohort method is used. Problem statement : Associations between problematic smartphone use and behavioural difficulties, quality of life, and school performance among children and adolescents. This study was conducted in Leipzig Research Center for Civilization Diseases, University of Leipzig) and was publishes in March 2022. Objectives : To investigate relation between problematic use of mobile and behaviour difficulties. Results: In the present sample, PSU was present in 13 children (2.3%) Older age, female gender high daily smart phone usage time of 2 h, and intensive smartphone use for social networking, gaming, or watching video clips were significantly associated with more PSU symptoms. Children and adolescents reporting more PSU

symptoms also showed lower QoL more behavioural difficulties, and poor school performance, independently of age, gender socio-economic status, and daily smartphone usage time, in contrast, daily smartphone usage time per se showed only weak or non-significant associations with these aspects of healthy and behaviour. Conclusion: Intensive smartphone use for entertainment may increase the risk of developing PSU symptoms. Furthermore, the results indicate that PSU symptoms (more than long smartphone usage times per se) are associated.

10) This study was carried out by Hyunjeong Kim, Min-Kyoung Cho, Hyeonyoung Ko and Jung Eun You. In this study cross-sectional study was conducted in 54,603 Korean adolescent participants. Problem statement: Association between smartphone usage and mental health in South Korean adolescent: the 2017 Korea Youth Risk Behaviour Web-based Survey. This study was published on March 2020. Objective: To evaluate the association of smartphone usage with depressive symptoms, suicidal thoughts and suicidal attempts in Korean adolescents. Results: Among the participants, 25.6% of male students and 38.4% of female students reported using their smartphone for at least 30 hours per week. As time duration of smartphone usage increased, the risk of experiencing depressive symptoms, suicidal thoughts, and suicide attempt tended to increase, with odds ratios (95% confidence interval) of 1.18 (1.10-1.26), 1.18 (1.08-1.29), and 1.34 (1.11-1.60), respectively, for high smartphone usage compared with low smartphone usage. These associations remained significant with only slight change in odds ratios after consideration of problems that may be caused by smartphone usage, such as conflicts with family members or peers, or disturbance in school work. Conclusion: Smartphone overuse was independently associated with an increased risk of mental health problems, which did not seem to be mediated by the problems caused by smartphone usage. Conclusion: Smartphone overuse was independently associated with an increased risk of mental health problems, which did not seem to be mediated by the problems caused by smartphone usage.

11) This study carried out by Rüstem Mustafaoglu, Zeynal Yasaci, Emrah Zirek, Mark D Griffiths. Problem statement: The relationship between smartphone addiction and musculoskeletal pain prevalence among young population. In this study cross-sectional study was used. This study was conducted in the Department of Physiotherapy and Rehabilitation, Division of Physiotherapy and Faculty of Health Sciences Istanbul. Results: A total of 249 participants were included in this cross-sectional study. The body parts that were reported with the highest prevalence of musculoskeletal pain were the upper back (70.3%), neck (65.9%), and wrists/hands (68.7%). The SAS scores were correlated with duration of smartphone use on a typical day ($P = 0.001$) duration of owning a smartphone ($P = 0.027$) and musculoskeletal pain prevalence in the neck ($P = 0.001$) wrists/hands ($P = 0.001$) shoulders ($P = 0.025$), and upper back ($P = 0.023$). The SAS score was significantly associated with prevalence of musculoskeletal pain in the neck (odds ratio [OR], 1.08; 95% confidence interval [CI], 0.98-1.10; $P=0.002$), wrists/hands (OR, 1.07; 95% CI, 0.97-1.09; $P=0.001$), and upper back (OR, 1.10; 95% CI, 0.98-1.11; $P = 0.033$). Conclusions: The findings indicated that the upper back, neck, and wrists/hands have a higher prevalence of musculoskeletal pain among smartphone users, particularly those with a smartphone addiction. Smartphone addiction scores were correlated with duration of smartphone use on a typical day, duration of owning a smartphone, and musculoskeletal pain prevalence in the neck, wrists/hands, shoulders, and upper back.

12) This study was carried out by Mohammad Saud Alotaibi, Mim Fox, Zubair Ahmed Rata. In this study qualitative method was used. Problem statement: Perspectives and Experiences of Smartphone Overuse among University Students in Umm Al-Qura University (UQU), Saudi Arabia: A Qualitative Analysis. Results: The findings of the thematic data analysis resulted in the identification of four main themes: perception of smartphone use; causes of smartphone overuse;

negative impacts of smartphone overuse; and strategies to reduce overuse of smartphone. Under each theme, a further group of subthemes and codes was identified. Conclusion : Students and staff held both positive and negative perceptions about using a smart phone. Personal factors (having free time and low self-confidence); smartphone factors (reasonable price, attractive advertisements (ads), and engaging smartphone Apps); and social factors (social pressure and fear of losing a connection) appeared the main potential factors leading to smartphone overuse among the participants. The main negative impacts of a smartphone overuse were found to be related to low academic productivity, poor physical health (body pain, lack of sleep, and low exercise), compromised mental well-being (stress and negative emotions), and decreased socialisation (social isolation and a reduction in face-to-face communication). The participants suggested that awareness campaigns about smartphone overuse, promoting family and social events, encouraging physical activities, and limiting internet use can reduce smartphone usage among university students. Findings for the qualitative data revealed how university students and staff perceive smartphone use in the Saudi Arabian context. Their real-world understanding of the leading factors of smartphone overuse and addiction among university students is of significant interest and value for both understanding smartphone addiction and devising specific real-world prevention interventions. The implications of the study are given below. 1. Develop policies and guidelines limiting the usage of smartphones during lectures, Establish free and accessible sports facilities in all universities. 3. Develop specific counselling and prevention programmes with regard to smartphone overuse and addiction in universities. Educate students about the proper use of social media.

13) This study carried out by Huan Liu, Zhiqing Zhou, Ergang Zhu, Long Huang. Cross sectional study was used. This study was conducted on medical students in China. Problem statement: Smartphone addiction and its associated factors among freshman medical students in China. Result :: The sociodemographic characteristics of the participants We investigated a total of 2,182 college students in this study, of which 1,009 (46.2%) were males and 1,173 (53.8%) were females. Their ages ranged from 17 to 22, with a mean of 19.65 ± 0.83. Of the participants, 57.1% lived in rural areas, 27.5% lived in towns, and 15.3% lived in cities. Of the participants, 38.1% perceived high study pressure, 52.0% perceived medium study pressure, and 9.9% perceived low study pressure. In addition, 45.1% had high satisfaction with the profession, 50.3% had medium satisfaction with the profession, and 4.7% had medium satisfaction with the profession. The demographic characteristics of the participants (ie., sex and residence) Conclusions: This cross-sectional study suggests that smartphone addiction is common among Chinese freshmen medical students. Smartphone addiction was common among the freshmen medical students surveyed. The findings imply that promotional programs, aimed at enhancing mental health and professional identity among freshmen medical students, help to reduce smartphone addiction in this population.

14) This study was carried out by Fatma Tayhan Kartal, Yabancı Nurcan. This study was performed on college students. Problem Statement: Relation between eating disorder and internet and smartphone addiction in college students. The study was published on August 2021. Objective: To association relationship between eating behaviour disorder and smartphones and the internet in college students. Results : 12.6% of the students participating in the study were at risk for eating disorders. Female students had higher EAT-40 scores than male students. 13% of students had potential internet addiction. According to Pearson chi-square test, the prevalence of potential internet addiction (36.4%) in students with eating disorder was higher than those without eating disorder (9.7%) ($p < 0.05$). Pearson correlation analyses displayed that Smartphone Addiction Test score associated positively with EAT-40 score ($r = 0.277$) and Internet Addiction Test score ($r = 0.665$) and students' body mass index (BMI) ($r = 0.121$). In addition to these, students' duration of staying on the internet correlated with their BMI ($r = 0.137$). Males had a higher rate of potential internet addiction than females (22.4% in males and 9.7% in females, respectively) ($p < 0.05$). Conclusion:

The present results suggest that students' duration of using the internet affects smartphone addiction and internet addiction, both of which influence eating behavior disorder. In addition, both smartphone and internet addiction and eating behavior disorder correlated positively and significantly with overweight."

15) This study carried out by Mohammad Saud Alotaibi, Mim Fox, Robyn Coman, Zubair Ahmed Ratan. **Problemstatement:** Prevalence and Its Association on Academic Performance, Physical Health, and Mental Well-Being among University Students in Umm Al-Qura University (UQU), Saudi . In this study Quantitative study was used. This study conducted on May 2019 and February 2021 at Umm Al-Qura University, Saudi Arabia. **Objective:** To investigation association smart phone addiction and Academic performance. **Result :** A total of 545 undergraduate students, mostly females, aged <21 years old and lived with large family sizes. More than half owned a smartphone for 5-8 years and the majority used their smartphone on average 6-11 h per day for social networking (82.6%), entertainment (66.2%) and web surfing (59.6%). Most of the participants were smartphone-addicted (67.0%). Logistic regression analysis showed that age < 21, not gainfully employed, small family size and high family income were the main significant socio-demographic predictors of smartphone addiction. Smartphone-addicted participants were more likely to: have lower academic performance (GPA); be physically inactive; have poor sleep; be overweight/obese; have pain in their shoulder (39.2%), eyes (62.2%) and neck (67.7%) and have a serious mental illness (30.7%). This finding has significant implications for decision makers and suggests that smartphone education focusing on the physical and mental health consequences of smartphone addiction among university students can be beneficial. **Conclusions :** This study's findings suggest that smartphone addiction was prevalent among university students. Additionally, the finding showed that socio-demographic variables (age 21 or less, not gainfully employed, small family size and high family income) and average daily use of more than 6 h, entertainment and social networking were significant predictors of smartphone addiction, Furthermore, the results showed that smartphone addiction students more likely to had a lower GPA and poor physical health as well as having a serious mental illness compered to non-addicted students. This finding suggests that smartphone education focusing on physical and mental health consequences of smartphone addiction among university students can be beneficial.

16) The study was conducted by Mohsen Safari, Jung Sheng Chen, Hung Ching Wu, Xavier c Fung This study was carried in female college and was published on 24 february2022. **Objectives :** To investigate effects of smartphone addiction between weight stigma and physical activities **Result :** [0:38 pm, 10/06/2022] Nilay: There were significant differences on weight (-1.001), BMI (n<0.001) p weight status(-0.001), SPA (p<0.001), and WRSS (-0.001) between the moderate to high and low FA groups. Table 2 displays the currelations between the studied variables. Except for age, all variables were positively correlated with each other ($r = 0.14$) to 0.45; p-values ranged from 0.007 to <0.001)[0:39 pm, 10/06/2022] Nilay: The results of Haves PROCESS Model 14 showed that weight status was associated with WRSS (coefficient-9.13, SE = 1.13 mu < 0.001 S3%CI=6.90, 11.36 see Tahlo) and level of 1A (odds ratio [OK] = 0.47 003: 95% CI 023, 093) WRSS (OR 096 p=0.05 \% 95% CI = 0.921 0,997) and SPA .(OK=0.11.) =0.003, 95% CT-0027, 0.468) were associated with level of PA. Moreover, SPA moderated the relationship between WRSS and level of PA (OR-1.18 p-0049; 95 6,C1-1,00,1,11). However, the indirect effect was not significant in the presence of SPA (mt = 0.05, 51 -0.16:95% CI = - 0.24 , 0.38) The overall moderated mediation model seas not supported, with the index of moderated. mediatin=0.44 (95% CI 0.017, 0.960). **Conclusion :** This study shows that female university students with WRSS who are engaged in SPA may be at higher risk of low PA and that 525 may intensity the negative effects of WRSS on PA. Therefore, it is recommended that people, especially those with overweight/obesity and those more likely to experience Wass, should be particularly caretul regarding ex ceive use of smartphones, because this

may decrease PA and expose them to further complications of sedentary lifestyles. Furthermore, healthcare providers should focus preventive strategies and treatment programs on young female students who feel WRSS and are at risk of SPA, in order to keep them physically active.

17) This study was conducted by Zubair Ratan, Anne Parrish, Sojib Zaman, Mohammad Alotaibi. In this study cross sectional method was used and was published on 22 November 2021. Problem statement : Smartphone addiction and associated health outcome in adult population : a systematic review. Objectives : to investigate impact of smartphone addiction on health outcome. Result : A total of 2550 potential studies were identified. After screening and removing duplicates, twenty-seven (27) studies were eligible for this review. A detailed study selection process based on the PRISMA flow chart is presented in Figure 1. Sample sizes ranged from 30 to 5372 adults . Seven were conducted in South Korea [21-27], three in Saudi Arabia [28-30], four in China [31-34], four in Turkey [35-38], one in India [139] one in Taiwan [40], one in Switzerland [41], one in the USA [42], one in Italy [43], one in Thailand [44], and three were international studies [45-47] . Smartphone addiction was measured in the study sample using different scales, however, the Smartphone Addiction Scale, Short Version (SAS-SV; n=8) was the most common measure . Among the selected studies, nine studies were considered to be "good", seventeen articles were considered to be "fair", and the remaining one was considered "poor". Conclusion : The current review describes the effect of smartphones on health outcomes in the adult population. Although the diagnostic criteria and effect of smartphone addiction are yet to be fully established, this review provides invaluable findings about the health impact of smartphone addiction and has significant implications for policy and decision makers. There is a need for more longitudinal studies to validate and strengthen this review's findings.

18) This study was carried out by Ifeanyi Peter Ifeanyi , Joshua Eber chukwuere. in this study Quantitative research approach was used. The study was performed on college students at north-west university, southafrica. Problem Statement: impact of using smartphone on academic performance of undergraduate students. The study was published on September 2018. objective: Investigating the impacts (positive and negative) of smartphone use on academic performance of undergraduate students. Result : most of undergraduate students are using smartphone to engage with fellow students and lectures. It was also found that using smartphone distracts students from their studies in certain aspects. Result also showed impact of using smartphone on student academic capabilities and progression. Conclusion : the findings show that there are many ways that smartphones affect the academic lives of the undergraduate students at the North-West University. In literature studies, there were arguments made for and against the impacts that smartphones have on the academic performance of students. This study can conclude with the fact that using smartphones made an impact on students both positively and negatively. Then, it will be highly beneficial if there could be more research carried out in developing countries on how students use smartphones to increase their academic performance, how low-income families or communities have impacts on students' usage of smartphones and the impact of smartphones on students attending classes and other academic related activities. This study presents an in-depth understanding on the effects of smartphones on undergraduate students in a developing country. The findings show that undergraduate students, in general, need to understand that smartphones improve their social and academic lives and it can also cause decreased performance in academic studies. However, the effective use of smartphones brings in more advantages than disadvantages to undergraduate students' lives. The results of this study will enlighten undergraduate students on the effects of using smartphones for multiple aspects.

19) This study was conducted by Ellan Thorburn, Rodney Pope, Shaoyu Wang. In this study survey method was used and survey population included Australian adults (over 18 years of age) residing in eastern state of Australia. Problem statement: Access Musculoskeletal symptoms among adult smartphone and tablet device users: a retrospective study. Published on December 2021. Objective: To investigate the prevalence and pattern of musculoskeletal symptoms among adult smartphone and tablet device users. "Results: Of the 207 participants, 59.9% reported musculoskeletal symptoms during or after device use; for 64.5% of these, symptoms began within the first 30 min (mostly between 15 and 30 min) of commencing usage. No statistically significant differences were observed between smartphone-only users and tablet device users in proportions reporting symptoms during device use ($\chi^2 = .350$, N= 207, p= .554). The most prevalent symptom was stiffness. The most prevalent symptom occurred in the neck (18.1% in smartphone-only users and 19.3% in tablet device users). Tablet users who were 18–24 year-old and used their device for more than 30 min in each usage session more often experienced symptoms (82.4% prevalence) than those who used a device for 30 min or less (52.2%) ($\chi^2 = 4.723$, N= 63, p= .030). Conclusion: These findings suggest that user age, duration and frequency of usage, and type of device are important factors to consider in the formation of evidence-based guidelines to reduce experiences of musculoskeletal symptoms among smartphone and tablet device users. If usage was capped at < 15 min, the majority of smartphone and tablet device users would avoid symptoms"

20) This study carried out by Melina Throuvala, Halley M. Pontes, Loannis Tsaousis, Mark D Griffiths. Problem statement: Exploring the dimensions of smartphone Distraction Development, Validation, Measurement, Invariance, and latent Mean Difference of the smartphone Distraction scale (SDS). This study was conducted on a sample of British University students. And published on March 2021. Objective: 1. To identify the latent dimensions of SD and develop a respective pool of items. 2. Evaluate the scale's validity and reliability. 3. Investigate the criterion-related, convergent and divergent validity with existing measure from the smartphone literature. Results: The 16-item SDS was best conceptualized in a four-factor model solution comprising attention impulsiveness, online vigilance, emotion regulation, and multitasking. Construct validity was established using relevant psychosocial and mental health measures, with SDS scores being moderately associated with deficient self-regulation and problematic social media use. Gender measurement invariance was achieved at the configural, metric, and scalar levels, and latent mean differences indicated that females had significantly higher means than males across all four SDS latent factors. CONCLUSION: Attention management may be one of the most critical skills of this century where information is abundant. Attention is a SCATCE resource and its control may be impaired by the online environment and digital devices available. Distraction is invariably part of an individuals' online and offline experiences. The present study sought to devise the first SDS and further investigate its psychometric properties, given the absence of a similar construct in the smartphone literature. The SDS is best conceptualized within a four-factor solution. Additionally, the SDS was found to present with gender measurement invariance at the configural, metric, and scalar levels, suggesting that the scale functions equivalently across the two gender groups. Moreover, latent mean analysis indicated gender differences underlying both cognitive and emotive dimensions of distraction in smartphone use.

21) This study carried out by Ibrahim Arpacı. Problem statement: Relationships Between Early Maladaptive Schemas and Smartphone Addiction: the Moderating Role of Mindfulness. This study was conducted in Turkey on SEM based multi-group analysis using data collected from 660 mobile users. And published on June 2021. Objective: 1) This study investigated the relationships between early maladaptive schemas (EMSSs) and smartphone addiction. 2) To investigated the moderating role of mindfulness in the relationship between EMSS and smartphone addiction. Result: Results indicated that none of the EMSSs were significantly associated with smartphone addiction for average

users. On the other hand, certain EMSS were significantly associated with smartphone addiction for intermittent and addicted users. The schemas of social isolation/mistrust, approval seeking, and abandonment were positively associated with smartphone addiction for intermittent users, whereas approval seeking and entitlement/insufficient self-control were positively associated with smartphone addiction for addicted users. The findings implied that those who have higher score on the EMSS were more likely to become addicted to smartphones. The results further indicated that mindfulness significantly moderated these relationships, suggesting that as mindfulness increases, the number of schemas related to smartphone addiction decreases. Conclusion : Diffusion and adoption of smartphones have exponentially increased across the globe in recent years. By the third quarter of 2018, 94% of US adults (aged 18-29 years) own a smartphone (Pew Research Center 2018). Further, the penetration rate of smartphones among adults in the developed countries is estimated to be 90% (5% increase over 2018) by the end of 2023 (Deloitte Global 2018). In Europe, users interact with their smartphones 48 times a day and 62% of them check their smartphones within 15 min of waking up (Deloitte Global 2018). Users will interact with their smartphones on an average 65 times a day in 2023 (20% increase)

22). This study carried out by Linda Fischer-Grote, Oswald D. Kothgassner Medical University of Vienna, Anna Felnhofer. Problem statement: Risk factors for problematic smartphone use in children and adolescents: a review of existing literature Risikofaktoren für problematischen Smartphone-Gebrauch bei Kindern und Jugendlichen: eine Übersichtsarbeit. This study was conducted on children and adolescents And published on 6 September 2011 Objective: This studies investigate focusing on specific risk factors predicting problematic smartphone use in children and adolescents. Result: Results The search yielded 38 articles that met the criteria for inclusion in this review. Research regarding influencing factors such as gender, age, and social, family, and personality factors, as well as duration of use and use patterns, could be found. Results seem to cautiously suggest that using a smart phone for gaming and social networking might be risk factors, whereas having good friendships might constitute a protective factor. Also, female adolescents seem to be prone to a higher smartphone addiction risk than male adolescents. For family, school, and personality factors, results are still scarce, and more research is needed. Conclusion : A concise theoretical conceptualization of problematic smartphone use and corresponding standardized measures are needed to increase comparability of future studies and to thereby add to a clearer understanding of this contested concept.

CHAPTER III

RESEARCH METHODOLOGY

INTRODUCTION

In recent years, Mobile telecommunication systems have grown significantly and Mobile Phones have become an essential part of daily life and are very popular among every age group. Mobile phone virtually affected the society's accessibility, security, safety social activities.

These days students of junior college use expensive and sophisticated Mobile. The rampant use of social networking, texting and chatting on Mobile Phones result in lower grades in exam and poor academic performance of students.

The spread of mobile phone is affecting people lives and relationship and also affects how people interact face to face Impact of higher education / learning globally influenced at large with advance in information technology (emad et al 2015) but so far while it has brought about some problem and threats stemming from irresponsible use of smart phones among teens young adult.

Mobile phone addiction has negative impact on student learning and overall academic performance the greater the negative impact on learning skill and cognitive abilities of students needed for academic success are negatively affected by excessive phone use

Mobile phone is a device which has affected our social contacts, education system, safety, business activities and many other aspects of life (Ling, 2003). It is one of those consumers' goods which created its market very rapidly and replaced other forms of communications. Being widely used around the world equally by rich and poor, it was formally introduced in Pakistan in early 1990s and was taken as status symbol but it is now a dire need of majority.

Mobile phone is a device which has affected our social contacts, education system, safety, and many other aspects of life. It is one of those consumers' goods which created its market very rapidly and replaced other forms of communications. Being widely used around the world equally by rich and poor. Students have an upper hand when they have the convenience of the mobile device, not just for the online lectures they can also use it for entertainment purposes like movies, games, social media, etc.

RESEARCH APPROACH

Research approach involves the description of the plan to investigate the phenomenon under study in the structured (quantitative)

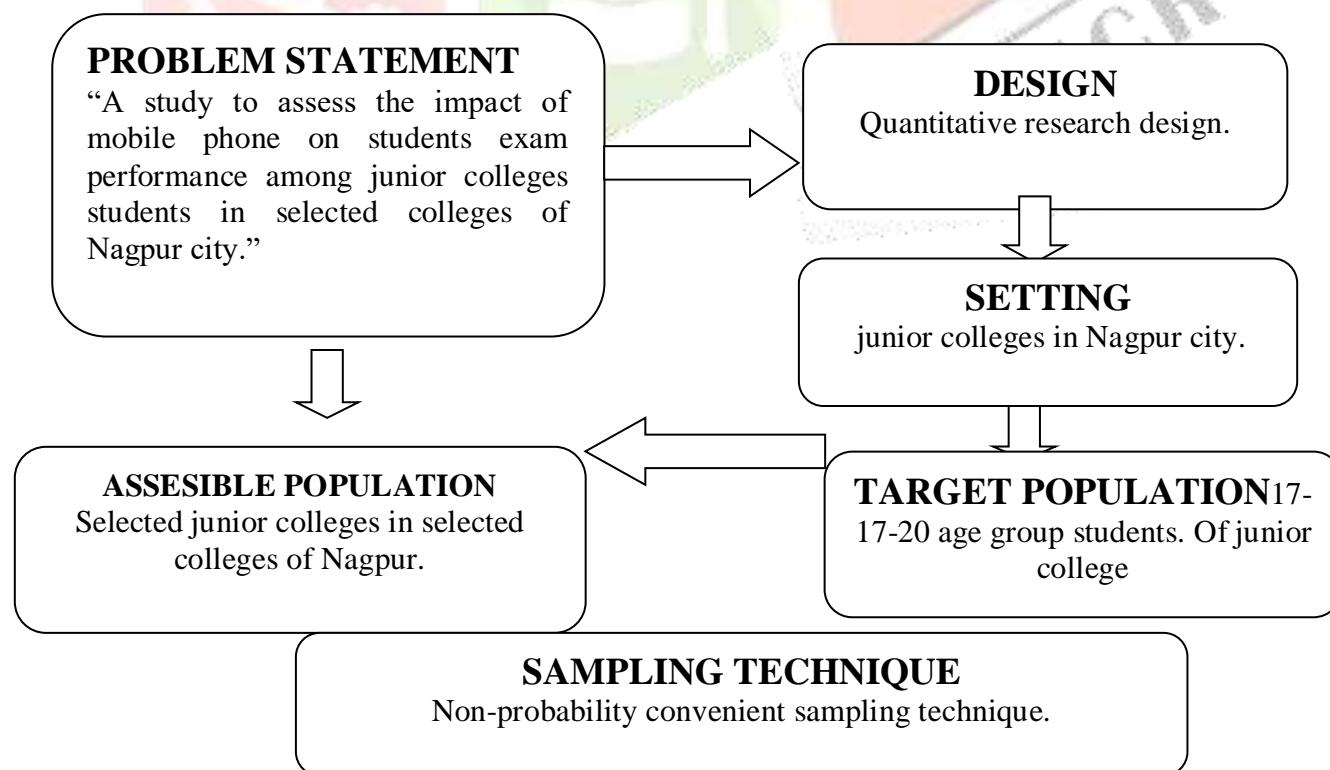
In this study, quantitative approach was used.

RESEARCH DESIGN

The research design is the researcher's overall plan for answering the research the research questions or testing the research hypothesis. The term research design can be defined as a blue print to conduct a research study, which involve the description of research approach, study setting, sample size, sampling technique, tool and method of data collection and analysis to answer a specific research question for testing research hypothesis

According to Polit and Hungler, research design refer to researchers overall plan for obtaining and it spells out the strategies adopted to develop information that is accruable, objective and interpretable.

In this study non-experimental descriptive design was used.



**SAMPLE SIZE**

100

**TOOLS**

Structured Questionnaire on student exam performance among junior college students in selected college of Nagpur city .

**VARIABLES**

Independent variable = A study to assess the impact of mobile phone

Dependent variable= impact of mobile phone on student exam performance among junior colleges students in selected colleges of Nagpur city.”

**Analysis**

Analysis was done by using descriptive and inferential statistics.

**Report writing****flowchart representing Research Design**

RESEARCH SETTING

According to S. K. Sharma, "Setting refers to for conducting research, can be natural partially controlled, or highly controlled."(13)

In this study, setting was selected junior college of Nagpur city.

- Pilot study at Vidarbha buniyadi junior college, Nagpur.
- Main study at Perna junior college, Nagpur.

VARIABLES

According to S.K.Sharma, "Variables are qualities, properties or characteristics of persons."

In this study, "variable was knowledge regarding impact of mobile phone on student exam performance

POPULATION

According to SK Sharma, "Population refers to entire aggregate of cases that meets designated criteria

In this study, population was all students of junior college.

TARGET POPULATION

According to S K Sharma "Target population refers to the entire population in which the researcher are interested and to which they would like to generalize the research finding."

In this study the target population selected for the study all student of junior college.

ACCESSIBLE POPULATION

According S K Sharma, "Accessible population refers to the aggregate of cases that conform to designated inclusion or exclusion criteria and that are accessible as subject of the study.

In this study accessible population all selected student of junior colleges the time of data collection in selected colleges of Nagpur.

SAMPLING

SAMPLE: According to S K Sharma, A part or subset of population selected to participate in all research study (13)

In this study sample consisted of student in age group 17-20 years in selected college of Nagpur city.

SAMPLING TECHNIQUE

According to S K Sharma, "It refer to process of selecting a portion of population to represent entire population."(13)

In this study non probability convenient sampling technique was used.

SAMPLING SIZE

According to S K Sharma, "It is the number of samples being selected in the study."(13)
100 students. who were available during the period of data collection.

SAMPLING CRITERIA

It is the criteria that specify characteristics that a population does have

- **Inclusion criteria:**

In this study inclusion criteria was.

- 1) Students who were present at the time of data collection.
- 2) Students in the age-group of 17-20 years.

- **Exclusion criteria:**

In this study exclusion criteria was.

- 1) Students who were not willing to participate in the study

DESCRIPTION OF TOOL

A structured questionnaire on the knowledge regarding impact of mobile phone on Exam performance was prepared to collect data. It had two section

Section A

Questionnaire related to demographic variable including age, gender,, education status, family income, occupation status, source of information.

Section B

Self-structural questionnaire on Impact of mobile phone on student exam performance.

Yes answer to each question was scored as “2” and No was scored “1”

KNOWLEDGE SCORE GRADING

Level of knowledge score

Poor

Average

Good

Excellent

Percentage score

0-20%(1-6)

21-40%(7-12)

41-60%(13-18)

61-80%(19-24)

81-100%(25-30)

VALIDITY

Validity of tool will be established in consultant with guide and expert in the fields

RELIABILITY

By using Guttman Split Half form method of reliability, of the tool was 0.7163 and hence the tool was reliable.

Pearson's Correlation Coefficient	0.556
Reliability(%)	0.7163

PILOT STUDY

A pilot study is referred to a small scale preliminary try out of the method to be used in an actually large study which acquaints the researcher with problem that can be corrected in proportion for the large research study.

Pilot study was conducted on 10 sample in Vidarbha buniyadi junior college. It was conducted on 21/04/2022 Permission from the concerned authorities of the area was obtained before conducting the study.

The purpose and the usefulness of the study were explained to the concerned authorities before taking permission.

The non-probability convenient sampling technique was used for the selection of sample. The tool were distributed to the sample and investigated.

DATA COLLECTION PROCESS

It is a precise systematic gathering of information relevant to the research purpose or the specific objectives or hypothesis of a study. The procedure for collecting data is not mechanical process that can be carefully planned prior to initiation. The investigator as a whole person should be totally involved, perceiving, reacting, interacting, reflecting, attaching, meaning and recording

Main study data collection was done from 10th MAY to 11th MAY 2022.

- a. Written permission was taken from concerned authority.
- b. The purpose of data collection was informed to all samples and informed consent was taken,
- c. Questionnaires were distributed to the sample. Approximately, 20 to 30 minutes was given to them to fulfil the questionnaires in front of investigator.

PLAN FOR DATA ANALYSIS

The data was decided to be analysed by both descriptive and inferential statistics on the basis of objectives and hypothesis of the study. To compute the data, a master data sheet was prepared by the investigator.

CHAPTER IV **ANALYSIS AND INTERPRETATION**

This chapter deals with analysis and interpretation of the data collected from 100 samples who were junior college students. The present study has been taken up to assess the knowledge regarding the impact of mobile phone on exam performance among junior college students in selected college of Nagpur City. Analysis and interpretation is based on the objectives of the study.

A structured questionnaire to collect the knowledge score was used for data collection. The analysis was done with the help of inferential and descriptive statistics.

THE OBJECTIVES OF THE STUDY WERE:

1. To assess the knowledge regarding the impact of mobile phone on exam performance among junior college students in selected college of Nagpur city.
2. To associate the knowledge score regarding the impact of mobile phone on exam performance among junior college students in selected college of Nagpur City with selected demographic variables.

ORGANIZATION OF FINDINGS

section:

- **Section A:** Distribution of junior college students with regards to demographic variables.
- **Section B:** Assessment of level of knowledge regarding impact of mobile phone on exam performance among junior college students in selected college of Nagpur city.

The analysis and interpretation of the observations are given in the following

Section C: Association of knowledge score regarding impact of mobile phone on exam performance among junior college students in selected college of Nagpur City with their selected demographic variables.

Hypothesis:

Null Hypothesis H0: There is no significant association between knowledge score regarding impact of mobile phone on exam performance among junior college students in selected college of Nagpur City and their demographic variables.

Alternative Hypothesis H1: There is no significant association between knowledge score regarding impact of mobile phone on exam performance among junior college students in selected college of Nagpur City and their demographic variables.

SECTION A

This section deals with percentage wise distribution of junior college students with regards to their demographic characteristics. A convenient sample of 100 subjects was drawn from the study population, who were from selected junior colleges of Nagpur city. The data obtained to describe the sample characteristics including age, gender, educational status, monthly family income, occupation, knowledge regarding impact of mobile phone and source of knowledge respectively.

Table 1:

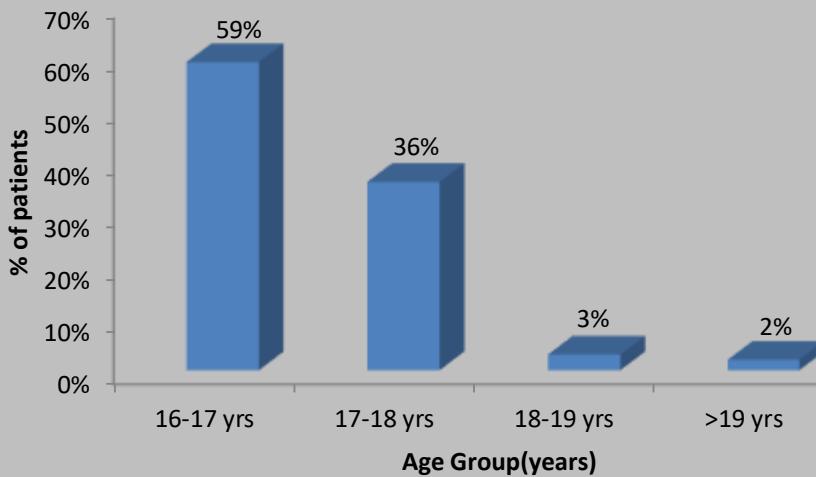
Percentage wise distribution of Junior College students according to their demographic characteristics.

n=100

Demographic Variables	No. of students	Percentage(%)
Age(yrs)		
16-17 yrs	59	59
17-18 yrs	36	36
18-19 yrs	3	3
>19 yrs	2	2
Gender		
Male	46	49
Female	54	54
Educational Status		
11 th Standard	100	0
12 th Standard	0	0
Monthly Family Income(Rs)		
Below 5000 Rs	8	8
5000-10000 Rs	19	19
10000-20000 Rs	35	35
>20000 Rs	38	38
Occupation of parents		
Government Service	9	9
Private Service	25	25
Business	38	38
Homemaker	4	4
Labour	24	24
Source of knowledge regarding impact of mobile phone		
Friends	9	9
Personal Experience	50	50
Social Media	38	38
Relatives	3	3

Graph 1:

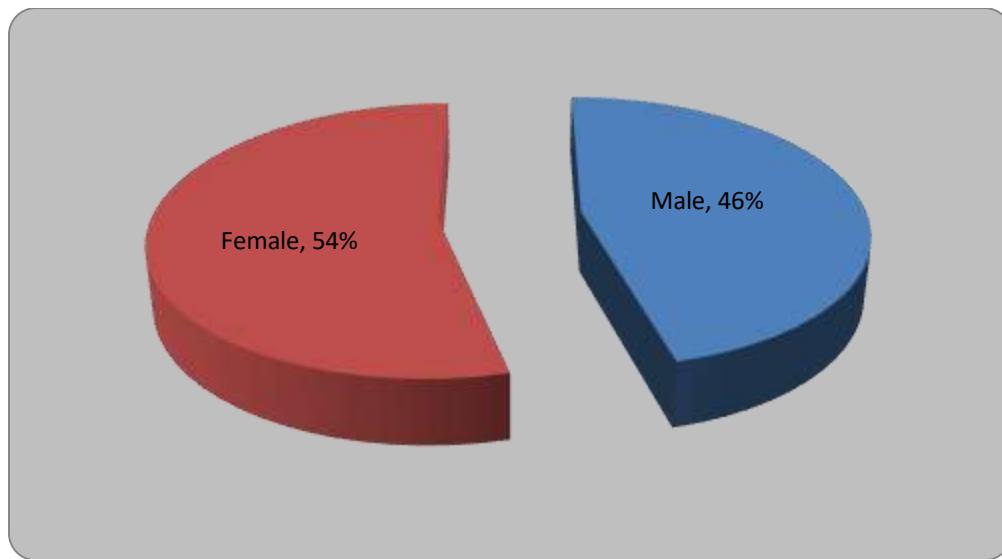
Percentage wise distribution of junior colleges students according to their age(yrs)



56% of junior college students were in the age group of 16-17 years, 36% were in 17-18 years, 3% in 18-19 years and 2% of them were more than 19 years of age.

Graph 2:

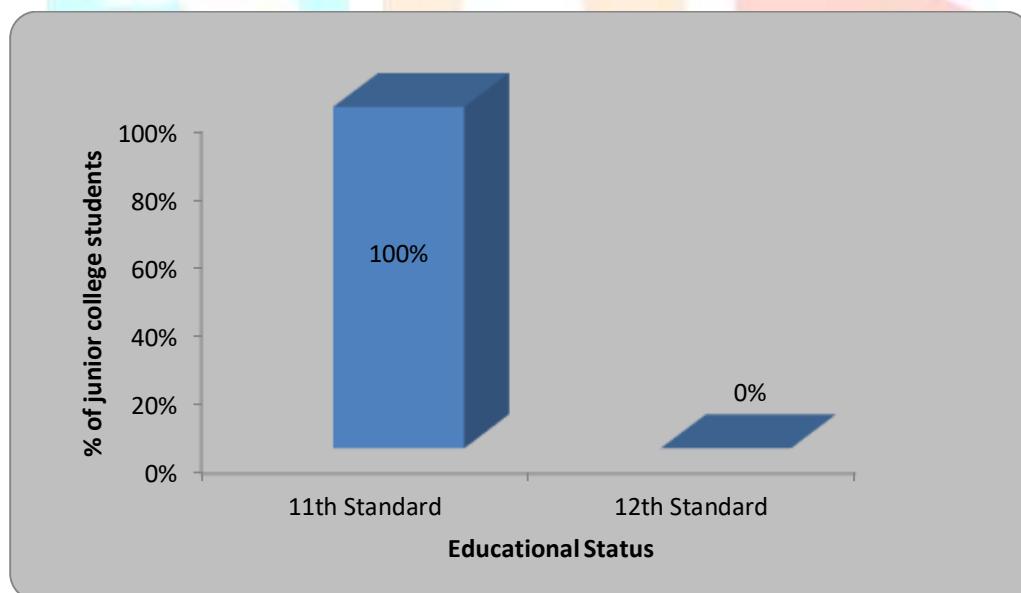
Percentage wise distribution of junior college students according to their gender



46% of junior college students were male and 54% of them were females.

Graph 3:

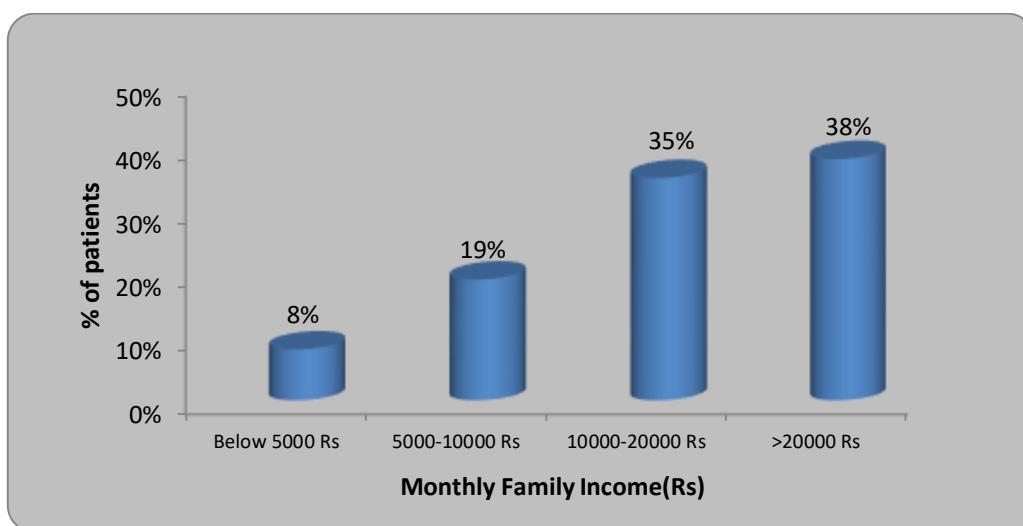
Percentage wise distribution of junior college students according to education



All(100%) of junior college students were studying in 11th standard.

Graph 4:

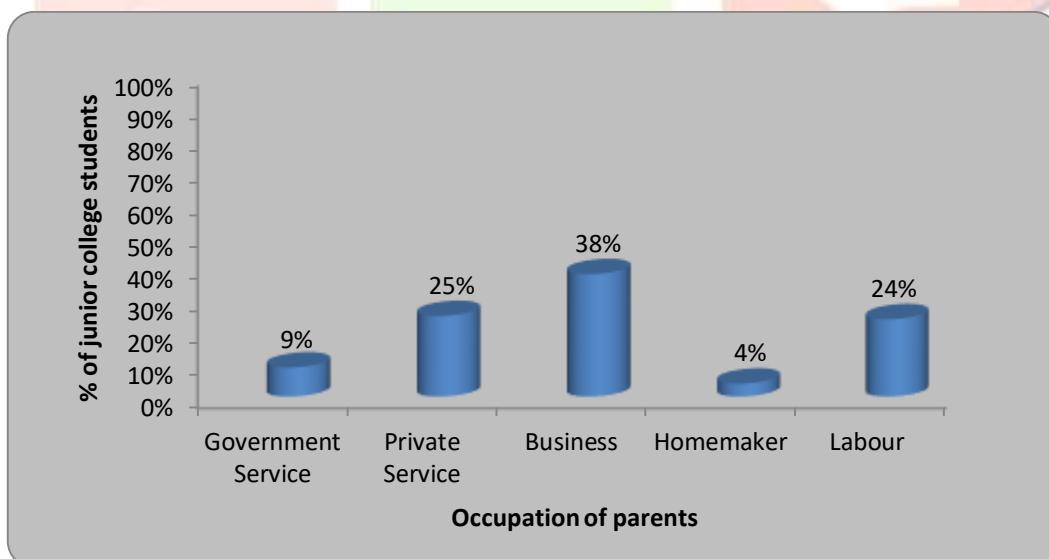
Percentage wise distribution of junior college students according to monthly income(Rs)



8% of junior college students were having monthly family income of below 5000 Rs, 19% of them had between 5000-10000 Rs, 35% had between Rs 10000-20000 and 38% of them had monthly family income of more than 20000 Rs.

Graph 5:

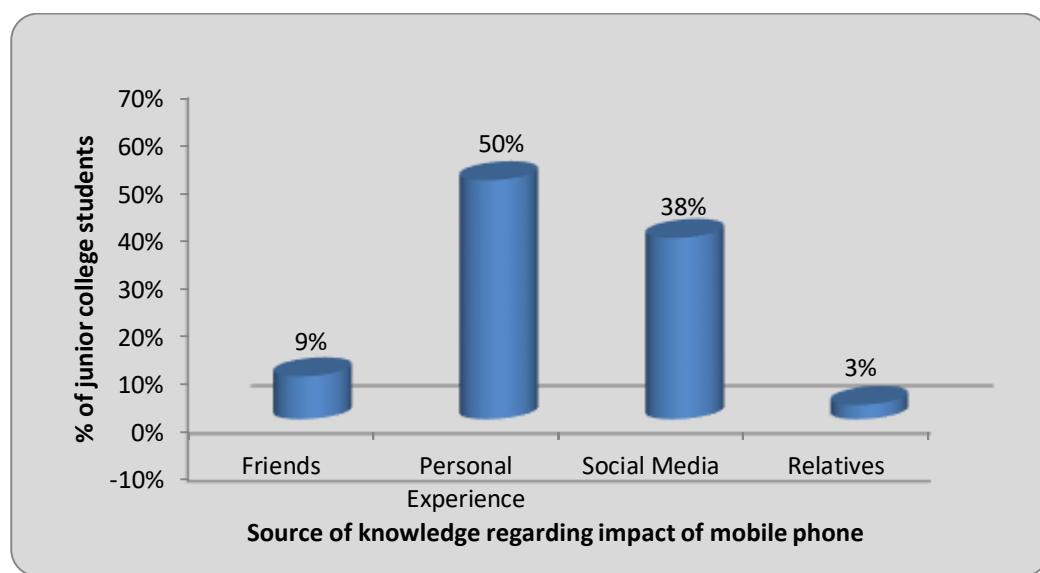
Percentage wise distribution of junior college students according to Occupation of parents



9% parents of junior college students were government servant, 25% of them were doing private services, 38% of them were doing business, 4% of them were homemaker and 24% of them were labourer.

Graph 6:

Percentage wise distribution of junior college students according to Source of information



9% of junior college students were having information about impact of mobile phone from friends, 50% from personal experience and 38% of junior college students had information from social media.

SECTION B

ASSESSMENT OF LEVEL OF KNOWLEDGE REGARDING THE IMPACT OF MOBILE PHONE ON EXAM PERFORMANCE AMONG JUNIOR COLLEGE STUDENTS IN SELECTED COLLEGE OF NAGPUR CITY.

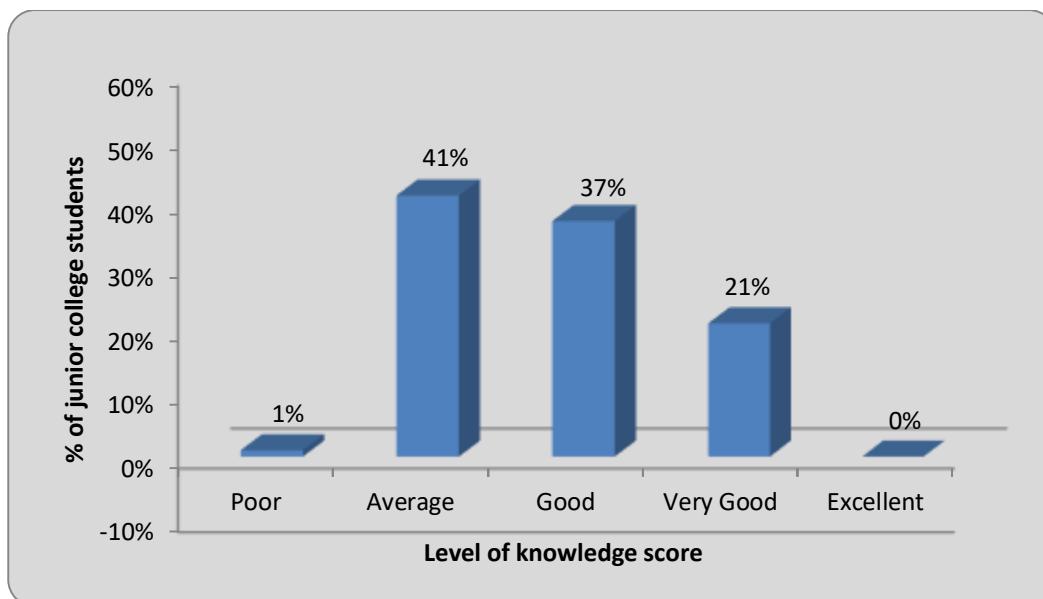
This section deals with the assessment of level of knowledge regarding the impact of mobile phone on exam performance among junior college students in selected colleges of Nagpur city. The level of knowledge score is divided under following heading of poor, average, good, very good and excellent.

Table 2:
Assessment with level of knowledge score
n=100

Level of knowledge	Score Range	Level of Knowledge Score	
		No of junior college students	Percentage
Poor	0-20%(1-6)	1	1
Average	21-40%(7-12)	41	41
Good	41-60%(13-18)	37	37
Very Good	61-80%(19-24)	21	21
Excellent	81-100%(25-30)	0	0
Minimum score		5	
Maximum score		23	
Mean knowledge score		14.16±4.23	
Mean % Knowledge Score		47.20±14.25	

Graph 7:

Assessment with level of knowledge score

**SECTION C****ASSOCIATION OF LEVEL OF KNOWLEDGE SCORE REGARDING THE IMPACT OF MOBILE PHONE ON EXAM PERFORMANCE AMONG JUNIOR COLLEGE STUDENTS IN RELATION TO DEMOGRAPHIC VARIABLE.****Table 3: Association of knowledge score regarding the impact of mobile phone on exam performance in relation to age in years.**

n=100

Age in years	No. of students	Mean knowledge score	F-value	p-value
16-17 yrs	59	14.05±4.16	0.05	0.98 NS,p>0.05
17-18 yrs	36	14.25±4.66		
18-19 yrs	3	14.66±4.50		
>19 yrs	2	15±0		

This table shows the association of knowledge score with age in years of junior college students from selected junior colleges of Nagpur city. The tabulated 'F' values was 2.68(df=3,96) which is much higher than the calculated 'F' i.e. 0.05 at 5% level of significance. Also the calculated 'p'=0.98 which was much higher than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that age in years of junior college students is statistically not associated with their knowledge score.

Table 4: Association of knowledge score regarding the impact of mobile phone on exam performance in relation to gender.

n=100

Gender	No. of students	Mean knowledge score	t-value	p-value
Male	46	14.67±4.65	1.04	0.29 NS,p>0.05
Female	54	13.77±3.96		

This table shows the association of knowledge score with gender of junior college students from selected junior colleges of Nagpur city. The tabulated 't' values was 1.98(df=98) which is much higher than the calculated 't' i.e. 1.04 at 5% level of significance. Also the calculated 'p'=0.29 which was much higher than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that gender of junior college students is statistically not associated with their knowledge score.

Table 5: Association of knowledge score regarding the impact of mobile phone on exam performance in relation to monthly family income(Rs)

n=100

Monthly family income(Rs)	No. of students	Mean knowledge score	F-value	p-value
Below 5000 Rs	8	19.25±2.86	6.43	0.001 S,p<0.05
5000-10000 Rs	19	14.89±4.24		
10000-20000 Rs	35	14.22±4.11		
>20000 Rs	38	12.65±3.85		

This table shows the association of knowledge score with monthly family income(Rs) of junior college students from selected junior colleges of Nagpur city. The tabulated 'F' values was 2.68(df=3,96) which is less than the calculated 'F' i.e. 6.43 at 5% level of significance. Also the calculated 'p'=0.001 which was less than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that monthly family income(Rs) of junior college students is statistically associated with their knowledge score.

Table 6: Association of knowledge score regarding the impact of mobile phone on exam performance in relation to occupation of their parents

n=100

Parent's Occupation	No. of students	Mean knowledge score	F-value	p-value
Government Service	9	13.22±5.28	2.53	0.045 S,p<0.05
Private Service	25	13±4.27		
Business	38	14.02±4.29		
Homemaker	4	19.50±2.38		
Labour	24	15.04±3.41		

This table shows the association of knowledge score with parent's education of junior college students from selected junior colleges of Nagpur city. The tabulated 'F' values was 2.45(df=4,95) which is less than the calculated 'F' i.e. 2.53 at 5% level of significance. Also the calculated 'p'=0.045 which was less than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that parent's education of junior college students is statistically associated with their knowledge score.

Table 7: Association of knowledge score regarding the impact of mobile phone on exam performance in relation to source of information

n=100

Source of information	No. of students	Mean knowledge score	F-value	p-value
Friends	9	14.88±4.42	3.01	0.034 S,p<0.05
Personal Experience	50	12.94±3.43		
Social Media	38	15.39±4.73		
Relatives	3	16.66±6.65		

This table shows the association of knowledge score with source of information of junior college students from selected junior colleges of Nagpur city. The tabulated 'F' values was 2.68(df=3,96) which is much less than the calculated 'F' i.e. 3.01 at 5% level of significance. Also the calculated 'p'=0.033 which was much less than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that source of information of junior college students is statistically associated with their knowledge score.

Reliability Analysis: Guttman Split Half Formmethod of reliability

Pearson's Correlation Coefficient	0.556
Reliability(%)	0.7163

By using Guttman Split Half form method of reliability, it is found to be 0.7163 and hence tool is reliable and valid.

STATISTICAL FORMULAS

Statistical analysis of assessment of knowledge regarding the impact of mobile phone on exam performance among junior college students in selected colleges of Nagpur city was carried out to find the significant difference between those values. Analysis of the data was done by using descriptive and inferential statistics both.

Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data.

Descriptive statistics are typically distinguished from inferential statistics. With descriptive statistics you are simply describing what is or what the data shows. With inferential statistics, you are trying to reach conclusions that extend beyond the immediate data alone. For instance, we use inferential statistics to try to infer from the sample data what the population might think. Or, we use inferential statistics to make

judgments of the probability that an observed difference between groups is a dependable one or one that might have happened by chance in this study. Thus, we use inferential statistics to make inferences from our data to more general conditions; we use descriptive statistics simply to describe what's going on in our data.

The software used in the analysis were SPSS 24.0 and Graph Pad Prism 7.0 version and $p < 0.05$ is considered as level of significance.

The statistical tests used for the analysis of the result were:

1. Students unpaired t test
2. One way ANOVA
3. Pearson' Correlation Coefficient
4. Reliability Analysis

Descriptive Statistics:

1. **Arithmetic Mean:** The arithmetic mean, or average, is the sum of the values divided by the number of values.

Formula:

$$\bar{X} = \frac{\sum_{i=1}^n X_i}{n}$$

Where:

\bar{X} = Sample arithmetic mean

n = Sample size

$X_i = i^{th}$ Observation of the random variable X

$\sum_{i=1}^n X_i$ = Summation of all the X_i values in the sample

2. Standard Deviation(SD) =

$$\sqrt{\frac{\sum(X - \bar{X})^2}{(n - 1)}}$$

where:

 X = each score \bar{X} = the mean or average n = the number of values Σ means we sum across the values

3. Mean percentage=Total Score/no of questions

4. Max/Min = Maximum/Minimum value of knowledge score

1. Students unpaired t test

Assumption:

1. The samples (n_1 and n_2) from two normal populations are independent.
2. One or both sample sizes are less than 30
3. The appropriate sampling distribution of the test statistic is the t distribution
4. The unknown variances of the two populations are not equal

To compute the two-sample t-test two major computations are needed before computing the t-test. First, you need to estimate the pooled standard deviation of the two samples. The pooled standard deviation gives an weighted average of the standard deviations of the two samples. The **pooled standard deviation** is going to be between the two standard deviations, with greater weight given to the standard deviation from a larger sample. The equation for the pooled standard deviation is:

$$S_p = \sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}}$$

In all work with two-sample t-test the degrees of freedom or df is:

$$df = n_1 + n_2 - 2$$

The formula for the two sample t-test is:

$$T = \frac{\bar{X} - \bar{Y}}{S_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

2. One way ANOVA

A One-Way Analysis of Variance is a way to test the equality of three or more means at one time by using variances.

Assumptions

- The populations from which the samples were obtained must be normally or approximately normally distributed.
- The samples must be independent.
- The variances of the populations must be equal.

Hypotheses

The null hypothesis will be that all population means are equal, the alternative hypothesis is that at least one mean is different.

In the following, lower case letters apply to the individual samples and capital letters apply to the entire set collectively. That is, n is one of many sample sizes, but N is the total sample size.

Grand Mean

The grand mean of a set of samples is the total of all the data values divided by the total sample size. This requires that you have all of the sample data available to you, which is usually the case, but not always. It turns out that all that is necessary to find perform a one-way analysis of variance are the number of samples, the sample means, the sample variances, and the sample sizes.

Another way to find the grand mean is to find the weighted average of the sample means. The weight applied is the sample size.

$$\bar{X}_{GM} = \frac{\sum n \bar{x}}{\sum n} \quad \bar{X}_{GM} = \frac{\sum x}{N}$$

Total Variation

The total variation (not variance) is comprised the sum of the squares of the differences of each mean with the grand mean.

There is the between group variation and the within group variation. The whole idea behind the analysis of variance is to compare the ratio of between group variance to within group variance. If the variance caused by the interaction between the samples is much larger when compared to the variance that appears within each group, then it is because the means aren't the same.

$$SS(T) = \sum (x - \bar{X}_{GM})^2$$

Between Group variation

The variation due to the interaction between the samples is denoted SS(B) for Sum of Squares Between groups. If the sample means are close to each other (and therefore the Grand Mean) this will be small. There are k samples involved with one data value for each sample (the sample mean), so there are k-1 degrees of freedom.

The variance due to the interaction between the samples is denoted MS(B) for Mean Square Between groups. This is the between group variation divided by its degrees of freedom. It is also denoted by

$$s_b^2$$

Within Group Variation $SS(B) = \sum n(\bar{x} - \bar{X}_{GM})^2$

The variation due to differences within individual samples, denoted SS(W) for Sum of Squares Within groups. Each sample is considered independently, no interaction between samples is involved. The degrees of freedom is equal to the sum of the individual degrees of freedom for each sample. Since each sample has degrees of freedom equal to one less than their sample sizes, and there are k samples, the total degrees of freedom is k less than the total sample size: $df = N - k$.

The variance due to the differences within individual samples is denoted MS(W) for Mean Square Within groups. This is the $SS(W) = \sum df \cdot s^2$ within group variation divided by its degrees of freedom. It is also denoted by s_w^2 . It is the weighted average of the variances (weighted with the degrees of freedom).

F test statistic

Recall that a F variable is the ratio of two independent chi-square variables divided by their respective degrees of freedom. Also recall that the F test statistic is the ratio of two sample variances, well, it turns out that's exactly what we have here. The F test statistic is found by dividing the between group variance by the within group variance. The degrees of freedom for the numerator are the degrees of freedom for the between group (k-1) and the degrees of freedom for the denominator are the degrees of freedom for the within group (N-k).

$$F = \frac{s_b^2}{s_w^2}$$

Summary Table

All of this sounds like a lot to remember, and it is. However, there is a table which makes things really nice.

	SS	df	MS	F
Between	SS(B)	k-1	SS(B) ----- k-1	MS(B) ----- MS(W)
Within	SS(W)	N-k	SS(W) ----- N-k	
Total	SS(W) + SS(B)	N-1		

Notice that each Mean Square is just the Sum of Squares divided by its degrees of freedom, and the F value is the ratio of the mean squares. Do not put the largest variance in the numerator, always divide the between variance by the within variance. If the between variance is smaller than the within variance, then the means are really close to each other and you will fail to reject the claim that they are all equal. The degrees of freedom of the F-test are in the same order they appear in the table.

3. Reliability Analysis

Guttman Split Half Form Method:

Guttman Split Half forms reliability is a measure of reliability obtained by administering different versions of an assessment tool (both versions must contain items that probe the same construct, skill, knowledge base, etc.) to the same group of individuals. The scores from the two half i.e. even and odd half can then be correlated in order to evaluate the consistency of results across alternate versions, the Spearman Brown prophecy formula is used to estimate the reliability coefficient of the entire test/scale.

The Spearman Brown prophecy formula is:

$$\text{Reliability } D_{xx'} = (2 * r / 1 + r)$$

where r is the correlation between the half-tests.

4. Pearson's Correlation Coefficient

In statistics, the **Pearson product-moment correlation coefficient** (sometimes referred to as the **PPMCC** or **PCC** or **Pearson's r**) is a measure of the linear correlation (dependence) between two variables X and Y , giving a value between +1 and -1 inclusive, where 1 is total positive correlation, 0 is no correlation, and -1 is total negative correlation. It is widely used in the sciences as a measure of the degree of linear dependence between two variables. It was developed by Karl Pearson from a related idea introduced by Francis Galton in the 1880s.

The formula for Pearson's correlation takes on many forms. A commonly used formula is shown below. The formula looks a bit complicated, but taken step by step as shown in the numerical example, it is really quite simple.

$$r = \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sqrt{(\sum X^2 - \frac{(\sum X)^2}{N})(\sum Y^2 - \frac{(\sum Y)^2}{N})}}$$

CHAPTER V

SUMMARY, FINDING, IMPLACEMENT, DISCUSSION, CONCLUSION AND RECOMMENDATION

INTRODUCTION

In recent years, Mobile telecommunication systems have grown significantly and Mobile Phones have become an essential part of daily life and are very popular among every age group. Mobile phone virtually affected the society's accessibility, security, safety social activities.

These days students of junior college use expensive and sophisticated Mobile. The rampant use of social networking, texting and chatting on Mobile Phones result in lower grades in exam and poor academic performance of students.

The spread of mobile phone is affecting people lives and relationship and also affects how people interact face to face Impact of higher education / learning globally influenced at large with advance in information technology (emad et al 2015) but so far while it has brought about some problem and threats stemming from irresponsible use of smart phones among teens young adult

Mobile phone addiction has negative impact on student learning and overall academic performance the greater the negative impact on learning skill and cognitive abilities of students needed for academic success are negatively affected by excessive phone use

Mobile phone is a device which has affected our social contacts, education system, safety, and many other aspects of life . It is one of those consumers' goods which created its market very rapidly and replaced other forms of communications. Being widely used around the world equally by rich and poor.

PROBLEM STATEMENT

” A study to assess knowledge regarding the impact of mobile phone on exam performance among junior colleges students in selected college of Nagpur city.”

OBJECTIVE

- 1) To assess the impact of mobile phone on exam performance among junior college students.
- 2) To find the association between knowledge on impact of mobile on exam performance among junior college students and selected demographic variables

HYPOTHESIS :

Null Hypothesis H0: There is no significant association between knowledge score regarding impact of mobile phone on exam performance among junior college students in selected college of Nagpur City and their demographic variables.

Alternative Hypothesis H1: There is no significant association between knowledge score regarding impact of mobile phone on exam performance among junior college students in selected college of Nagpur City and their demographic variables.

RESEARCH APPROACH

In this study quantitative approach was used.

RESEARCH DESIGN:

According to Suresh K Sharma The term research design can be defined as blue print to conduct a research study, which involve the description of research approach, study setting, sample size, sampling technique, tools and method of data collection and analysis to answer to specific research question for testing research hypothesis.

In this study non-experimental descriptive design was used.

SAMPLING TECHNIQUE:

In this study non probability convenient sampling technique was used.

TOOLS VALIDITY:

A structured questionnaire on the knowledge regarding impact of mobile phone on Exam performance will be prepared to collect data. It has two sections

Section A

Questionnaire related to demographic variable including age, gender, family income, education of parents.

Section B

Self-structural questionnaire on Impact of mobile phone on student exam performance.

KNOWLEDGE SCORE GRADING

Level of knowledge score	Score Range	Percentage
Poor	0-6	0-20 %
Average	7-12	23.3- 40 %
Good	13-18	43.3-60 %
Very good	19-24	63.3-80 %
Excellent	25-30	83.3-100 %

VALIDITY:

A structured questionnaire on the knowledge regarding impact of mobile phone on Exam performance will be prepared to collect data.

Reliability Analysis : guttman split form method of reliability

Person's correlation coefficient 0.556

Reliability 0.7163

PILOT STUDY:

A pilot study is referred to a small scale preliminary try out of the method to be used or in fact actually the researcher which acquaints large study with problem that can be corrected in proportion for the large study. Pilot study was conducted on 10 students by using structured questionnaire. It was conducted on date 21/4/2022. permission from the concerned authorities will be obtained before conducting the study. The purpose of the study will be explained to the sample before collecting data.

The convenient non-probability sampling technique was used for the selection of samples. the tool were distributed to the sample and investigated.

MAIN STUDY DATA COLLECTION

It is a precise systematic gathering of information relevant to the research purpose or the specific objectives of a study. The procedure for collecting data is not mechanical process that can be carefully planned prior to initiation. The investigator as a whole person should be totally involved, perceiving, reacting, interacting, reflecting, attaching, meaning and recording.

Main study data collection was done from 11 May 2022.

a. Written permission was taken from concerned authority.

b. The purpose of data collection was informed to all samples and informed consent was taken.

c. Questionnaires was distributed to the subjects. Approximately 20-30 minutes will be given to them to fulfil the questionnaires in front of investigator.

MAJOR FINDING OF THE STUDY AND DISCUSSION

The following are the major findings of the study.

SECTION – A

DEMOGRAPHIC VARIABLES :

This section deals with percentage wise distribution of junior students in selected colleges, Nagpur city in relation to demographic characteristics. A convenient sample of 100 subjects was drawn from the study population, who were from selected colleges Nagpur city . The data obtained to describe the sample characteristics including age, gender, educational status, monthly family income, occupation of parents and source of information respectively.

Distribution of junior students according to their age in years reveals that 59% of them were belonging to the age of 16 to 17 years, 36% in the age group of 17 to 18 years and 3% in 18 to 19. years and 2% in >19 years respectively .

Distribution of junior student according to their gender reveals that 49% of junior students were males and 54% of them were females.

Distribution of junior student according to their monthly family income reveals that 8% of upto below 5000 Rs , 19% of them had between 5000 - 10,000 Rs, 35% had between 10,000 – 20,000 Rs, and 38% of them had monthly family income >20,000 Rs.

Distribution of junior student according to their occupation of parents that 9% of them parents were government service , 25% were private service ,38% were business 4% were homemaker and 24% were labour

Distribution of junior student according the source of knowledge regarding impact of mobile phone reveals that 9% of them had information from friends ,50 % from their personal experience ,38% of them had information from social media and 3% from their relatives.

Section B

ASSESSMENT OF LEVEL OF KNOWLEDGE REGARDING THE IMPACT OF MOBILE PHONE ON EXAM PERFORMANCE AMONG JUNIOR COLLEGE STUDENTS IN SELECTED COLLEGE OF NAGPUR CITY.

This section deals with the percent wise distribution of junior student according to existing knowledge regarding the impact of mobile phone on exam performance revealed the following. The level of knowledge were seen into 5 categories poor ,average good ,very good and excellent .Each 20% of junior student had poor knowledge score ,21- 40 % had average ,41-60% had good ,61-80% had very good and 81-100% of them had excellent level of knowledge score.the minimum score was 5 and maximum score was 23.the mean knowledge score 14.16 ± 4.23 with mean % of knowledge score 74.20 ± 14.25

Section C**ASSESSMENT OF LEVEL OF KNOWLEDGE REGARDING THE IMPACT OF MOBILE PHONE ON EXAM PERFORMANCE AMONG JUNIOR COLLEGE STUDENTS IN SELECTED COLLEGE OF NAGPUR CITY.**

The association of knowledge score with age in years of junior college students from selected junior colleges of Nagpur city. The tabulated 'F' values was 2.68(df=3,96) which is much higher than the calculated 'F' i.e. 0.05 at 5% level of significance. Also the calculated 'p'=0.98 which was much higher than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that age in years of junior college students is statistically not associated with their knowledge score.

The association of knowledge score with gender of junior college students from selected junior colleges of Nagpur city. The tabulated 't' values was 1.98(df=98) which is much higher than the calculated 't' i.e. 1.04 at 5% level of significance. Also the calculated 'p'=0.29 which was much higher than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that gender of junior college students is statistically not associated with their knowledge score.

The association of knowledge score with monthly family income(Rs) of junior college students from selected junior colleges of Nagpur city. The tabulated 'F' values was 2.68(df=3,96) which is less than the calculated 'F' i.e. 6.43 at 5% level of significance. Also the calculated 'p'=0.001 which was less than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that monthly family income(Rs) of junior college students is statistically associated with their knowledge score.

The association of knowledge score with parent's education of junior college students from selected junior colleges of Nagpur city. The tabulated 'F' values was 2.45(df=4,95) which is less than the calculated 'F' i.e. 2.53 at 5% level of significance. Also the calculated 'p'=0.045 which was less than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that parent's education of junior college students is statistically associated with their knowledge score.

The association of knowledge score with source of information of junior college students from selected junior colleges of Nagpur city. The tabulated 'F' values was 2.68(df=3,96) which is much less than the calculated 'F' i.e. 3.01 at 5% level of significance. Also the calculated 'p'=0.033 which was much less than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that source of information of junior college students is statistically associated with their knowledge score.

IMPLICATIONS

The findings of the study have implications for nursing practice, nursing education, nursing administration and nursing research.

NURSING PRACTICE

When professional liability is recognized, it defined the parameter of the profession and the standard of professional conduct. Nurses should therefore enhance their professional knowledge. The role of nurses has expanded rapidly within past ten year to include the expertise specialization, autonomy and accountability. The patient is considered the consumer of nursing and health care.

NURSING EDUCATION

Health care personnel should be given an opportunity to update their knowledge periodically. Nowadays, much emphasis is given on comprehensive care in the nursing curriculum. So this study can be used by nursing teachers as an informative illustration for nursing students. For student nurses, knowledge regarding impact of mobile phone on student exam performance .

NURSING ADMINISTRATION

Findings of the study can be used by the nursing administrator in creating policies. It would help the nursing administrators to plan and organize continuing education to the nurses and to others for applying and updating the knowledge regarding impact of mobile phone on student exam performance . The result of the study contributes to the body of knowledge of nursing. Future investigators can use the finding and the methodology as a reference material.

NURSING RESEARCH

The findings of the study have added to the existing body of the knowledge regarding impact of mobile phone on student exam performance . Other researchers may utilize the suggestion and recommendations

for conducting further study. The tool and technique used has added to the body of knowledge and can be used for further references .

DISSCUSION :

Author – Qiupinghuangvinglishucaihuangjing qi

In a college –college in Changsha ,china

Published in may 6-2020

Result – the result show that prevelance of poor sleep quality in chinese college student was 9.0%.in multiple logistic regression analysis poor sleep quality was significantly with male gender (OR 2.80 P:0.022) , not having good physical health (OR : 2.01,P :0.020) headache (OR : 2.4 , p:0.0014) > five hours of daily smart phone use (OR:2.09,P:0.049) and more severe inability to control MPA (OR :2.04,P:0.040)

Conclusion

The frequency and percentage wise distribution of junior student according to existing knowledge regarding impact of mobile phone on student exam performance .

This section deals with the percent wise distribution of junior student according to existing knowledge regarding the impact of mobile phone on exam performance reveales the following. The level of knowledge were seen into 5 categories poor ,average good ,very good and excellent .Each 20% of junior student had poor knowledge score ,21- 40 % had average ,41-60% had good ,61-80% had very good and 81-100% of them had excellent level of knowledge score .the minimum score was 5 and maximum score was 23.the mean knowledge score 14.16 ± 4.23 with mean % of knowledge score 74.20 ± 14.25

The analysis that there was significant association between knowledge score with education status and source of information of women. There was no significant association between knowledge score with other demographic characteristics like age, gender , education status ,monthly family income, occupation of parents , source of information.

RECOMMENDATION

A similar study can be replicated on the large number students

A study can be conducted to assess the knowledge regarding impact of mobile phone on student exam performance .

A similar study can be conducted in senior colleges.

A similar study can be conducted in schools.

SUMMARY

This chapter deal with the major finding, implication, discussion,conclusion of the study and recommendations.

BIBLIOGRAPHY

- 1) Kaur, N. (n.d.). Impact of Mobile Phone usage on the academic performance of students. Pramanaresearch.Org. Retrieved March 12, 2022, from https://www.pramanaresearch.org/gallery/prj_c_d_29.pdf
- 2) Subramanian, S. S., & Sindhuja Rajesh, M. (n.d.). Impact of smart phone usage among college students -an analytical study. Ijsr.Net. Retrieved March12,2022,from<https://www.ijsr.net/archive/v6i9/ART20176642.pdf>
- 3) Rabiu, H., Muhammed, A. I., Umaru, Y., & Ahmed, H. T. (2016). Impact of mobile phone usage on academic performance among secondary school students in Taraba State, Nigeria. European Scientific Journal, 12(1), 466. <https://doi.org/10.19044/esj.2016.v12n1p466>

4) Effects of using mobile phones too much. (n.d.). Fcc.Gov. Retrieved March 12, 2022, from <https://ecfsapi.fcc.gov/file/7520941199.pdf>

5) **Assess.** (n.d.). Oxfordlearnersdictionaries.Com. Retrieved March 26, 2022, from <https://www.oxfordlearnersdictionaries.com/definition/english/assess>

6) **Impact.** (n.d.). Oxfordlearnersdictionaries.Com. Retrieved March 26, 2022, from <https://www.oxfordlearnersdictionaries.com/definition/english/impact-1>

7) **cell-phone** noun - Definition, pictures, pronunciation and usage notes. (n.d.). Oxfordlearnersdictionaries.Com. Retrieved March 26, 2022, from <https://www.oxfordlearnersdictionaries.com/definition/english/cell-phone>

8) **Student.** (n.d.). Oxfordlearnersdictionaries.Com. Retrieved March 26, 2022, from <https://www.oxfordlearnersdictionaries.com/definition/english/student>

9) **junior-college** noun - Definition, pictures, pronunciation and usage notes. (n.d.). Oxfordlearnersdictionaries.Com. Retrieved March 26, 2022, from https://www.oxfordlearnersdictionaries.com/definition/american_english/junior-college

10) **examination.** (n.d.). TheFreeDictionary.Com. Retrieved March 26, 2022, from <https://www.thefreedictionary.com/laboratory+examination>

11) (N.d.-a). Researchgate.Net. Retrieved June 10, 2022, from https://www.researchgate.net/publication/340064645_Association_between_Smartphone_Usage_and_Mental_Health_in_South_Korean_Adolescents_The_2017_Korea_Youth_Risk_Behavior_Web-Based_Survey

12) (N.d.-b). Researchgate.Net. Retrieved June 10, 2022, from https://www.researchgate.net/publication/348151175_The_relationship_between_smartphone_addiction_and_musculoskeletal_pain_prevalence_among_young_population_A_cross-sectional_study

13) (N.d.-c). Researchgate.Net. Retrieved June 10, 2022, from https://www.researchgate.net/publication/360319628_Smartphone_addiction_and_its_associated_factors_among_freshmen_medical_students_in_China_a_cross-sectional_study

14) (N.d.-d). Researchgate.Net. Retrieved June 10, 2022, from https://www.researchgate.net/publication/344608415_Relationship_between_eating_disorders_and_internet_and_smartphone_addiction_in_college_students

15) (N.d.-e). Researchgate.Net. Retrieved June 10, 2022, from https://www.researchgate.net/publication/359494907_Smartphone_Addiction_Prevalence_and_Its_Association_on_Academic_Performance_Physical_Health_and_Mental_Well

16) (N.d.-f). Researchgate.Net. Retrieved June 10, 2022, from https://www.researchgate.net/publication/358121309_Psychopathological_Symptoms_and_Personality_Traits_as_Predictors_of_Problematic_Smartphone_Use_in_Different_Age_Groups

17) (N.d.-g). Researchgate.Net. Retrieved June 10, 2022, from https://www.researchgate.net/publication/359784175_Perspectives_and_Experiences_of_Smartphone_Overuse_among_University_Students_in_Umm_Al-Qura_University_UQU_Saudi_Arabia_A_Qualitative_Analysis

18) Ifeanyi, I. P., & Chukwuere, J. E. (n.d.). The impact of using smartphones on the academic performance of undergraduate students. Eric.Ed. Gov. Retrieved June 10, 2022, from <https://files.eric.ed.gov/fulltext/EJ1247625.pdf>

19) (N.d.-a). Researchgate.Net. Retrieved June 11, 2022, from https://www.researchgate.net/publication/358843092.pdf_Effects_of_Weight_Related_SelfStigma_and_Smartphone_Addiction_on_Female_University_Students'_Physical_Activity_Level s from

20) (N.d.-b). Researchgate.Net. Retrieved June 11, 2022, from https://www.researchgate.net/publication/349881444_Exploringthe_Dimensions_of_Smartphone_Distraction_Development_Validation_Measurement_Invariance_and_Latent_Mean_Differences_of_the_Smartphone_Distraction_Scale_SDS

21) (N.d.-c). Researchgate.Net. Retrieved June 11, 2022, from https://www.researchgate.net/publication/338132535_Relationships_Between_Early_Maladaptive_Schemas_and_Smartphone_Addiction_the_Moderating_Role_of_Mindfulness

22) (N.d.-d). Researchgate.Net. Retrieved June 11, 2022, from https://www.researchgate.net/publication/335670203_Risk_factors_for_problematic_smartphone_use_in_children_and_adolescents_a_review_of_existing_literature_Risikofaktoren_fur_problematischen_Smartphone