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IMPACT OF SMART PHONES AND SOCIAL MEDIA ADDICTION IN STUDENTS- A MINI REVIEW

[1]Josy Jose, [2]Jomon M S

[1]Assistant Professor, [2]ADC

[1]Child Health Nursing

[1]Panna Dhai Maa Subharti Nursing College, Meerut, India

Abstract: Smart phones and social medias are the vital part of young generation. These are influencing their daily activities. Now a days we cannot live without smart gadgets simultaneously its negatively affecting the life. This study is **a**imed to find out the impact of smart phones and social media addiction in students. The two data bases were used to collect the reviews such as PubMed and Google scholar. Search terms included mobile phone, education, mental health, physical activity. Randomly collected the studies. Total 13 studies were included on the basis of impact of smart phones in mental health and wellbeing of children, impact of smart phone use in education, impact of mobile phone use in physical activity. Most of the studies were used smartphone addiction scale short version. This review **r**esults shows that, addiction of smart phone negatively is affecting the mental health such as depression, anxiety and suicidal attempt. In addition, it affecting the academics. Some studies contributing some intervention for the effective use of mobile phone in education. Some studies pointed out that, it's affecting the sleep of child and physical activity in order to they are suggesting some interventions. This review **c**oncluded that Smart phones use are adversely affecting the physical and mental health of the students.

Index Terms - Smart phones or mobile phones, addiction, physical activity, education, mental health wellbeing, social media, depression, anxiety, suicidal attempt

1. INTRODUCTION

Smart phones are useful in some way and the same time its adversely affecting the children education. Now a days, we know that electronic medias such as computers and phones are using in academic curriculum. It helps the facilitator to communicate the content easily. widely we were used electronic medias in COVID era. In that era many electronic evolutions were happened. In this study focusing to analyse the electronic media addiction how to affect their education. Electronic media addiction started from the home itself, even parents are engaging the children by giving the phone or other gadgets to them. In childhood onwards, they are watching cartoons, and other games through electronic gadgets. Parents have more involvement in this addiction. Parents are using this technique to handle this child in easy way. Some children never eat the food without watching cartoons, and other games, someone will not sleep without hearing music through phone. In childhood onwards, they are learning how to operate phones and other gadgets, eventually their brain is focusing to learn the thing through gadgets.

II.HOW TO AFFECT THE MEDIAS IN CHILDREN DAILY LIFE

New generation children cannot start their day without seeing medias. They will spend more time in front of this digital media. They are spending the quality time with this media such as Facebook, Instagram, YouTube and other video games. 50% students are using this media as a learning platform. And other 50%are using this platform for enjoyment. They are making through creating videos and posting on social media platform. But in the other hand, they were lacking the concentration in studies. The children who all are addicted, they are not concentrating in her studies.

Across sectional study was conducted to evaluate the problematic screen exposure in pre-schooler using a unique tool called seven-in-seven screen exposure questionnaire. This study aimed to assess the problematic screen exposure in Turkish preschool children by using a unique tool is called seven in seven screen exposure questionnaires. sample size of this study was1245 mother-child pair. Study setting was general paediatric clinic at tertiary care hospital, Turkey. In this study results showing that 280 children had a problematic screen exposure score of $\geq$ 7high. Children who postpone essential needs while using a screen, use touchscreen devices, and play video games for $\geq$1h per day had an increased risk of having a high PSE score ($p > 0.05$). The study concluded

that, problematic screen exposure revealed findings consistent with previous studies investigating the factors associated with excessive screen time. Excessive screen time is not the only factor involved in PSE. The other not recommended screen use characteristics such as independent and unrestricted use, use during meals and before bedtime, use under 2years of age, and not using high-quality programming should be considered, in addition to excessive screen time. Developing national scales to monitor problematic screen use in children would be more effective than monitoring screen time alone. All of the screen use characteristics not recommended in children would be evaluated using PSE scales. Problematic screen exposure scales might be useful for making guidelines for limiting problematic screen use, formulating culturally-appropriate intervention strategies, and monitor the results of intervention studies. Also, such scales may make it easier for paediatricians to monitor this issue, while exploring the history of screen usage from the parents. The "Seven in-Seven Screen Exposure Questionnaire" may serve as an example for further studies.[1]

III.IMPACT OF SMARTPHONE ADDICTION ON MENTAL HEALTH AND WELL-BEING AMONG CHILDREN

Smart phone addiction is affecting their mental health, A study conducted in children about relationship among smart phone addiction, stress, academic performance and satisfaction with life. The study aim was to explore whether satisfaction with life mediated by stress and academic performance facilitates smartphone addiction. Of 249 respondents, 54.2% were male. The average respondent was 20.96 years old (SD = 1.93) with an overall range between 17 and 26 years old. The percentage of students who were at high risk of smartphone addiction (44.6%) was slightly lower than that of students at low risk (49.1%). The percentage of students identified as having high levels of perceived stress (53.4%) was slightly greater than the percentage of students reporting low levels of perceived stress (46.6%). Results of this study showed the existence of a positive relationship between smartphone addiction and stress, a negative relationship between smartphone addiction and academic performance and a mediated negative relationship between smartphone addiction and satisfaction with life. There was a zero-order correlation between smartphone addiction and satisfaction with life on one hand and between perceived stress and academic performance on the other hand. Some of these findings are congruent[2.]

A meta-analysis was conducted on Smartphones, social media use and youth mental health in Ontario, the proportion of teenagers reporting moderate to serious mental distress increased from 24% in 2013, to 34% in 2015 and to 39% in 2017, with parallel increases in health service utilization. Inpatient hospital admissions of children and adolescents for mental health reasons increased substantially across Canada between 2007 and 2014, while admissions for other medical conditions in this age group decreased by 14%. Between 2009 and 2014, admissions to hospital for intentional self-harm increased by 110% in Canadian girls. Suicide is now the second leading cause of death for Canadian youth. A recent analysis of survey data found the 12-month prevalence of suicidal ideation, attempts and no suicidal self-injury to be 8.1%, 4.3% and 8.8%, respectively, among adolescents aged 14 to 17 years, with all rates being higher in girls. Similarly, administrative data in the United States show that presentations to hospital for suicidal ideation or attempts among children and adolescents almost doubled between 2008 and 2015, with the highest increase for adolescent girls. Self-poisoning rates among 10- to 18-year-olds, which had declined in the US since the turn of the century, increased substantially from 2011 to 2018, primarily among girls. Surveys of high school students in the US have shown a similar pattern for self-reported symptoms of depression, major depressive episodes and suicidality over the last 2 decades.[3] As per this meta-analysis, uses of smart phone is affecting the mental health of the adolescence. Suicidal ideation, self-harm injury and major depressive episodes were increased.

A study was conducted on Social Media and Mental Health: Benefits, Risks, and Opportunities for Research and Practice. This study was focused to identify the use of social media among mental health service users, and early efforts using social media for the delivery of evidence-based programs. In addition, they reviewed the risks, potential harms, and necessary safety precautions with using social media for mental health. The study conclude that explore opportunities using data science and machine learning, for example by leveraging social media for detecting mental disorders and developing predictive models aimed at characterizing the aetiology and progression of mental disorders. These various efforts using social media, as summarized in this commentary, hold promise for improving the lives of individuals living with mental disorders.[4]

IV. THE IMPACT OF SMART PHONES IN ACADEMIC ACTIVITY

A study was conducted the impact of undergraduates' Social Isolation on Smartphone Addiction: The Roles of Academic Anxiety and Social Media Use. The purpose of this study was to investigate associations among undergraduates' social isolation in this special context, social media use for obtaining information about the COVID-19 pandemic (i.e., communicative and non-communicative), academic anxiety, and smartphone addiction. A cross-sectional survey was conducted from May to June in 2022 and a total of 388 undergraduates were included. The results showed significant positive associations between social isolation and smartphone addiction and academic anxiety. Furthermore, academic anxiety played a mediating role in the effect of social isolation on smartphone addiction, which was moderated by non-communicative social media use. Some theoretical and practical implications as well as research limitations are discussed.[5]

A case study was conducted in primary school students to find out the impact of smartphone uses on learning effectiveness. This study investigated the effects of smartphone use on the perceived academic performance of elementary school students. Following the derivation of four hypotheses from the literature, descriptive analysis, *t* testing, one-way analysis of variance (ANOVA), Pearson correlation analysis, and one-way multivariate ANOVA (MANOVA) were performed to characterize the relationship between smartphone behaviour and academic performance with regard to learning effectiveness. All coefficients were positive and significant, supporting all four hypotheses. They were used structural equation modelling (SEM) to determine whether smartphone behaviour is a mediator of academic performance. The MANOVA results revealed that the students in the high smartphone use group academically outperformed those in the low smartphone use group. The results indicate that smartphone use constitutes a potential inequality in learning opportunities among elementary school students. Finally, in a discussion of whether smartphone

behaviour is a mediator of academic performance, it is proved that smartphone behaviour is the mediating variable impacting academic performance. Fewer smartphone access opportunities may adversely affect learning effectiveness and academic performance. This issue was more evident in COVID19 pandemic. This study was given the reference for policymakers and educators on how smartphone use in learning activities affects academic performance[6]

A study was conducted to assess the smartphone addiction and sleep quality on academic performance of university students: an exploratory research. This study was aimed to examine the relationship between smartphone addiction, sleep quality, and academic performance. The study sample size was323 students in a public university in Sabah to explore the relationship between smartphone addiction, sleep quality, and academic performance. A simple random sampling was used in the study. The Smartphone Addiction Scale Short Version (SAS-SV) and the Pittsburgh Sleep Quality Index (PSQI) were used in this study. SPSS was used as a tool of analysis for descriptive and inferential analysis. Pearson correlation was involved to test the hypothesis of the study. The result revealed that the greater the smartphone addiction, the lower the academic performance of university students. The finding also proved that students with poor sleep quality might exhibit low academic performance. Smartphone addiction was found to be associated with sleep quality where overusing smartphones was related to poor sleep quality in university students. On this basis, the problem of smartphone addiction and sleep quality should be tackled in order to improve the academic performance of university students and their overall health.[7]

The study was conducted the use of Smart Phones and Social Media in Medical Education: Trends, Advantages, Challenges and Barriers. This study aims to review the use of smart phones and social media in the context of medical education. It reviews the usage of smart phone and social medical applications including Facebook, WhatsApp and Edmodo for teaching and learning in medical education. The result reveals that The use of personal smartphones for teaching and learning among medical community is highly prevalent and increasing day by day. Medical students use the mobile application for online textbooks (70%), medical podcasts (60%), medical calculator (75%), online lecture (50%) and notes taking (45%). Relevant studies conclude that the majority of students use smart phones for education (62.7%), communication (81.7%) and recreation (82.5%). Social media has a great potential in educational setting and provide students a chance to involve, share and express knowledge and information with each other. Facebook, WhatsApp and Edmodo are the commonly used applications having multiple benefits like collaboration, feedback and engagement but negative aspects including addiction, distraction and maintenance of privacy have also been found. The review article concludes that social media is a powerful instrument for social interactions and is also used as a tool for teaching and learning. The integration of social media with traditional class teaching in medical education has clear advantages but there is a debate about the probable disadvantages as well.[8]

A study was conducted to assess the association between high adolescent smartphone use and academic impairment, conflicts with family members or friends, and suicide attempts This study aims to evaluate the association between smartphone use and suicide attempts, independent of possible confounders, including conflicts with family/friends and poor academic performance due to smartphone use. Data were obtained from the 2017 Korea Youth Risk Behaviour Web-based Survey, a nationally representative survey of middle- and high-school students (N = 62,276). Time spent using a smartphone was divided into four categories: less than 1 h, 1–2 h, 3–4 h, and 5 h or more a day. The association of conflicts with family due to smartphone use, conflicts with friends due to smartphone use, and poor academic performance due to smartphone use with suicide attempts and time spent using a smartphone were analysed using multiple and binary logistic regression analyses, respectively. The relationship between time spent on a smartphone and suicide attempts was analysed using a multiple logistic regression analysis. All analyses were also stratified according to the main purpose of smartphone use (process purposes/social purposes). Conflicts with family/friends due to smartphone use was significantly associated with suicide attempts ($P < 0.001$). The variables of conflicts with family, conflicts with friends and poor academic performance were also proportionally related to higher smartphone use ($P < 0.001$). The use of a smartphone was significantly associated with suicide attempts in a multiple logistic regression analysis (adjusted odds ratio for smartphone use 5 h or more a day 2.16; 95% CI 2.07–2.26; $P < 0.001$), and the association was more prominent with smartphone use for process purposes. Conflicts with family, conflicts with friends, poor academic performance, and suicide attempts were related to higher smartphone use in Korean adolescents. Time spent on a smartphone was positively related to suicide attempts, even after adjusting for conflicts with family members or friends and poor academic performance due to smartphone use.[9]

V.IMPACT OF SMART PHONE USE IN PHYSICAL ACTIVITY

The Impact of Smartphone Addiction on Chinese University Students' Physical Activity: Exploring the Role of Motivation and Self-Efficacy The study conducted an online survey on 628 males and 1159 female students from 10 universities in Henan Province, China, through a questionnaire survey application "Questionnaire Star". This study used three models to test the mediating effects of three types of motives (intrinsic motives, body-related motives, and social motives) and self-efficacy, respectively, in the relationship between smartphone addiction and physical activities. The results revealed that smartphone addiction leads to lower physical activities. Secondly, self-efficacy mediates smartphone addiction and physical activities, but the mediating effect of all three types of motivation is not significant. Thirdly, smartphone addiction did not affect intrinsic motivation and body-related motivation, but positively affects social motivation. Finally, as the motivation type changes from internal to external, the mediating effect of self-efficacy becomes stronger. This study showed that smartphone addiction lead to increase social motivation and decreased self-efficacy, and is a potential barrier to personal participation in physical activities. Our findings provide a new perspective for future design physical activities interventions in China and worldwide especially among university students where smartphone addiction is a problem.[10]

A Cross-Sectional Study was conducted to find out the associations of Objectively-Assessed Smartphone Use with Physical Activity, Sedentary Behaviour, Mood, and Sleep Quality in Young Adults: This study assesses the associations of objectively-measured smartphone time with physical activity, sedentary behaviour, mood, and sleep patterns among young adults by collecting real-time data of the smartphone screen-state. The sample consisted of 306 college-aged students (mean age ± SD: 20.7 ± 1.4 years; 60% males). Over seven days of time, the following variables were measured in the participants: objectively-measured smartphone use (Your Hour and Screen Time applications), objective and subjective physical activity (Google fit and Apple Health applications, and the International Physical Activity Questionnaire (IPAQ), respectively), the number of hours sitting (IPAQ), mood (The Profile of Mood State (POMS)), and sleep (The Pittsburgh Sleep Quality Index (PSQI)). Multiple regressions analyses showed that the number of hours sitting per day, physical activity, and the POMS Global Score significantly predicted smartphone use (adj.R2 = 0.15). Further, participants with low levels of physical activity were more likely to increase the use of smartphones (OR = 2.981). Moreover, mood state (β = 0.185; 95% CI = 0.05, 0.32) and sleep quality (β = 0.076; 95% CI = −0.06, 0.21) predicted smartphone use, with those reporting poor quality of sleep (PSQI index >5) being more likely to use the smartphone (OR = 2.679). In conclusion, there is an association between objectively-measured smartphone use and physical activity, sedentary behaviour, mood, and sleep patterns. Those participants with low levels of physical activity, high levels of sedentary behaviour, poor mood state, and poor sleep quality were more likely to spend more time using their smartphones.[11]

A study was conduct to assess the impact of smartphone addiction on chinese university students' physical activity: exploring the Role of Motivation and Self-Efficacy**.** We conducted an online survey on 628 males and 1159 female students from 10 universities in Henan Province, China, through a questionnaire survey application "Questionnaire Star". This study used three models to test the mediating effects of three types of motives (intrinsic motives, body-related motives, and social motives) and self-efficacy, respectively, in the relationship between smartphone addiction and physical activities. Our result confirmed that smartphone addiction leads to lower physical activities. Secondly, self-efficacy mediates smartphone addiction and physical activities, but the mediating effect of all three types of motivation is not significant. Thirdly, smartphone addiction did not affect intrinsic motivation and body-related motivation, but positively affects social motivation. Finally, as the motivation type changes from internal to external, the mediating effect of self-efficacy becomes stronger. This study showed that smartphone addiction lead to increase social motivation and decreased self-efficacy, and is a potential barrier to personal participation in physical activities. This study findings provide a new perspective for future design physical activities interventions in China and worldwide especially among university students where smartphone addiction is a problem.[12]

A college-based follow-up study was conducted to assess the impact of problematic mobile phone use and insufficient physical activity on depression symptoms: In total, 2134 college students participated in this follow-up study, which was conducted between June 2014 (wave 1) and December 2014 (wave 2) at Anhui Medical University. The Self-rating Questionnaire for Adolescent Problematic Mobile Phone Use and the Centre for Epidemiologic Studies Depression Scale were used to assess PMPU and depression symptoms, respectively. Physical activity (PA) was assessed with a reliable question from the Youth Risk Behaviour Survey. Joint effects of PMPU and PA were calculated, and increased depressive symptoms were assessed. We used multivariable-adjusted odds ratios (OR) with 95% confidence intervals (CI) to evaluate associations between depression symptoms and PMPU, IPA, and the PMPU/IPA joint effect, estimated by binary logistic regression models. Results showed that, PMPU and high PMPU/IPA joint effect scores were significantly associated with depression symptoms in waves 1 (OR 7.36, 95% CI: 5.09, 10.66) and 2 (OR 3.74, 95% CI: 2.56, 5.48). IPA was significantly associated with depression symptoms in wave 1 (OR 1.40, 95% CI: 1.09, 1.79) but not wave 2 (OR 1.24, 95% CI: 0.95, 1.62). PMPU and high PMPU/IPA joint effect scores were also significantly associated with increased depressive symptoms (OR 2.36, 95% CI: 1.55, 3.60). This study concluded that, these results suggest that PMPU is an important factor for depression in college students, and IPA may be a synergistic factor.

VI.CONCLUSION

Mobile phones are useful as well as harmful to physical and mental health. Especially in children, it is affecting their education. So, its mandatory to make laws to control the influence in student's life. Parents and teachers have to make remedial measures to control this addiction. Proper supervision and diversion therapy can also use to reduce the addiction.

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