"FAMILY PARTICIPATORY INTERVENTION STRATEGIES ON THE IMPACT OF SOCIAL MEDIA ADDICTION AND QUALITY OF SLEEP AMONG YOUNG ADULTS IN SELECTED COLLEGES IN CHENNAI, TAMIL NADU."

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ABSTRACT

Sleep has an important role in maintaining health and well being; this relationship is becoming increasingly recognised for adolescents and young adults. **The purpose of the current research was to find out the** relationship between quality of sleep and Social Media Addiction. A true experimental research was conducted among young adults aged between 18 - 24 years studying in selected colleges in Chennai .A total of 156 young adults were screened for social media addiction by Bergen social media addiction scale. Among them 80 young adults who were addicted to social media and willing to participate in this study were selected by using simple random sampling technique. Each 40 in experimental and control group were selected for the study .The questionnaire collected information on the following two aspects: (1) demography, (2) sleep quality by Pittsburgh Sleep Quality Index (PSQI),

Results: The study tools included socio demographic data such as Age , Gender, Educational status, Name of the course, University, Resident, stay in the hostel, day scholar, Type of family, Number of Family members in the family, Occupation of Father/ Mother, Monthly Income of parents, smoking and drinking habits, religion, and habitual use of smartphone before sleep, , practice of Physical activity /Exercise, difficulty in falling sleep every night, habit of taking any medicine to get sleep, number of hours spent for social media, six items from the Pittsburgh Sleep Quality Index (PSQI) were used to assess sleep quality. Participants responded these items (eg, "Wake up in the middle of the night or early morning") on a four-point scale ranging from 0 (never) to 3 (above 3 times per week). Pretest was conducted by administering questionnaire followed by Family participatory intervention strategies on negative impact of social media was given to the young adults and their parents. Results showed that regarding PSQI Score among young adults between experimental and control group there was significant improvement in sleep quality index scores among experimental group in comparison with control group.

Regarding association between sleep quality and demographic variables in experimental and control group in pretest, there was no significant difference between experimental and control group of adults whereas in post test, there was a significant difference between experimental and control group of adults PSQI score (t=10.08 P=0.001*** (S).

Key words:- Family participatory Intervention, quality of sleep, social media addiction, impact, young adults.

Introduction

The social media has become an indispensable part of people's daily lives as they are used to interacting with others, maintaining relationships, and dealing with work issues. Smartphone use is inextricably linked with social media use and people's use of social networking sites [eg, Facebook, Twitter, WeChat, TikTok].(36, 19,40). Many physicians will encounter young people who present with complaints or conditions that have some relation to poor sleep. Although social media use may provide many benefits in modern society, excessive or problematic use of social media can have adverse consequences on physical and mental health among a minority of individuals, especially young adults.(1,8,11,29) In extreme cases, the behavior results in consequences associated with other more traditional addictions such as salience, tolerance, withdrawal symptoms, relapse, mood modification, and conflict.(15).Moreover, negative consequences have been associated with Social Media addiction, such as depression and anxiety, and poor sleep quality..(25,21, 18,25).Sleep quality is an important predictor of health and well-being. Individuals with Social Media Addiction have the risk of poor sleep quality, including difficulty in falling asleep and/or maintaining sleep.(37,24).One study found that only social media use at bedtime was associated with a higher risk of poor sleep

quality among freshman college students(2).Another study with an adult sample aged 18 to 58 years old found that problematic social media use was related to poor sleep quality.(39) Sleep quality has also been demonstrated to be a mediator between problematic social media use and cognitive failures (eg, memory and motor functioning(39). In the present study, individuals with a higher level of Social Media addiction were expected to have poorer sleep quality. Moreover, in the relationship between sleep quality and executive functioning, previous research found insufficient sleep leads to poor self-regulatory capacity, and individuals with less sleep are unable to recover from the depletion of self-control resources.(17) For example, individuals with poorer sleep report poorer executive functioning than good sleepers(12). As one of the basic activities for individuals, sleep plays a vital role in brain and cognitive functions and sleep deprivation would impair executive functioning.(17).Poor sleep quality and weak circadian rhythm would make individuals unable to recover from the loss of self-control resources in the long run,(17).Moreover, there was also a significant and positive relationship between Social Media addiction and poor sleep quality, which was consistent with previous studies.(23,33,).The possible reason may be that a higher level of social media use would reduce melatonin output, and lead to poor sleep quality or sleep problems consequently,(4).

People all over the world can show excessive interest in social media and spend a great deal of time using social media. For this reason, social media has a negative effect on the lives of millions of people in the world (5,31).

Moreover, an increase in periods of social media use can cause a reduction in sleep quality (11). Poor sleep quality can lead to daytime sleepiness in students and to negative effects on their performance, school achievement, activities and energy (16). In another study, it was revealed that problems occurred in adolescents during the pandemic, such as delay in falling asleep, reduction in length of sleep, respiratory impairment during sleep, and sleepiness during the day, and that sleep routines were disrupted (7,13). The problem of lack of sleep is very common in adolescents, and is an important public health problem that needs intervention in several aspects, such as mental health, obesity and academic performance (27,28). It is emphasized that spending a long time on the Internet increases the possibility of exposure to risks and pathological tendencies, and that the time spent using social media is harmful to mental health (4, 9, 32, 34).

There are studies showing that social media addiction is positively associated with poor sleep quality (3,18,37). Social media use disorder also causes weak family and friend relationships in adolescents (24).

It has been found that adolescents with high levels of problematic internet use and of social media use suffer from depression, loneliness, lower sleep quality and high anxiety levels (6,4,12, 26). Poor sleep was most strongly associated with nighttime social media use (38). In this study total a of 176 young adults were screened for social media addiction by Bergen social media addiction scale. Among them 80 young adults who were addicted to social media and willing to participate in this study were selected by using simple random sampling technique, 40 each in experimental and control group .

Proposed system Aims:

- 1. Understand the level of social media addiction among young adults in-order to help them to overcome it.
- 2. Creating educational intervention to support the young adults in overcoming social media addiction and helping them to improve quality of sleep.

Objectives:

1. To assess the level of social media addiction among young adults in selected colleges in Chennai.

2. To correlate the social media addiction with the quality of sleep among young adults in experimental and control group.

2. To associate the selected demographic variables with of quality of sleep of young adults in Pretest and post test.

Materials and methods:

The study was conducted in selected Arts and science college and Nursing college in Chennai. Informed consent was obtained from the participants. True experimental research design was used for selection of samples. 156 respondents were surveyed for social media addiction by Bergen Social Media addiction scale. Among them 131 young adults were screened to have risk for social media addiction. Simple Random Sampling Technique (lottery method) was used to select 80 students, and allocated 40 in each to the experimental and control group. The questionnaire collected information on the following two aspects: (1) Socio demographic data such as Age, status, Gender, Educational Name of the course, University, Resident, stay in the hostel, day scholar, Type of family, Number of Family members in the family, Occupation of Father/ Mother, Monthly Income of parents, smoking and drinking habits, religion, and habitual use of smartphone before sleep, , practice of Physical activity /Exercise, difficulty in falling sleep every night, habit of taking any medicine to get sleep, number of hours spent for social media, (2) six items from the Pittsburgh Sleep Quality Index (PSQI) were used to assess sleep quality. Participants responded these items (eg, "Wake up in the middle of the night or early morning") on a four-point scale ranging from 0 (never) to 3 (above 3 times per week). Pretest was conducted followed by

family participatory intervention as awareness on negative impact of social media addiction was given to the young adults This was followed by group discussion arranged only for experimental group participants and their parents .Whereas the control have received routine academic activities. Post test was conducted after three months. The experimental group participants were instructed to maintain a dairy for their social media use daily. Instruction was given to their parents to monitor their children and maintain dairy when they engaged in social media use. Remainders were given to their email and via phone call.

Instruments

Social Media addiction was assessed using the Bergen Social Media Addiction Scale (BSMAS). The scale contains six items reflecting the core elements of addiction (ie, salience, conflict, mood modification, withdrawal, tolerance, and relapse). The items concern experiences during the past year (eg, "Felt an urge to use social media more and more") and are answered on a five-point scale, ranging from 1 (very rarely) to 5 (very often). The total score was calculated and higher scores indicate a greater risk of social Media Addiction.

Sleep Quality

Six items from the Pittsburgh Sleep Quality Index (PSQI) was used to assess sleep quality. Participants responded these items (eg, "Wake up in the middle of the night or early morning") on a four-point scale ranging from 0 (never) to 3 (above 3 times per week). Higher scores indicate greater sleep problems and poorer sleep quality.

Ethical consideration:

Ethical approval was obtained from the Ethics Review Committee of the university. IEC number is MMCH&RI/IEC/PhD/01/DEC 2021.All samples were informed about the study and all of them signed consent forms before thesurvey.

Demographic characteristic of young adults;

The demographic variables revealed that among 40 participants in experimental group majority were (N=14) 35% 18 years and in control group (N=14)35% were 20 years .In experimental group 21(52.50%) were doing Physical activity /Exercise.In control group 77.78% (N=21) spent three hours per day in social media.In experimental group 73.68% (N=14) spent three hours in social media every day. None of the respondents in experimental group in pre and post test reported for consumption of alcohol and smoking. Majority of them 77.50% (N=31), 69.23% (N=27) belongs to nuclear family in experimental group and control group. Most of them in control group 37.5% (N=15) sleep at 9.00pm at night every day and in experimental group 45.00% (N=18) at 10 pm (14). Physical activity / Exercise 52.50% (N=21) experimental group and 35% (N=14) in control group were not doing. 15% (N=06) were from experimental group and 12.5% (N=05) control group had difficulty in falling sleep every night .35.00% (N=14) of experimental group and 45% (N=18) of control have complained of back pain. In experimental group 85% (N=34) and in control group 70% (N=28) of them are interested in video gaming. In experimental group 22.5% (N=09) and control group 12.5% (N=05) spent 2 Hours to watch movie or series on the OTT platform everyday. Especially young people increasingly use social media and the internet, which is an easily and rapidly accessible means of mass communication, frequently for academic and other purposes. These tools are not merely a source of information, their use is also sought for other purposes such as social interaction, games and entertainment (30), Majority of them in experimental group 40.00% (N=16) and in control group 47.50% (N=19) checked Whats App status six times every day. Especially the greater amount of time that adolescents spend using social media has increased the negative effects on adolescents' general health and well being, including sleep (10).Social media use by individuals has steadily increased in recent years (10,12,19).

Results and discussion

ASSESSMENT OF QUALITY OF SLEEP AMONG YOUNG ADULTS PITTSBURGH SLEEP QUALITY INDEX SCALE (PSQI)

	Group				Mean	Student independent		
	Experim (n=40)	Experimental (n=40)		ol)	Difference	t=test		
PSQI score	Mean	SD	Mean	SD				
Pretest	8.97	1.14	8.75	1.24	0.21	t=0.80 P=0.42 DF=78 (NS)		
Posttest-I	6.03	1.19	8.58	1.07	2.55	t=10.08 P=0.001*** DF=78 (S)		

Table 1: PSQI Score Among Young Adults Between Experimental and Control Group

NS = Not significant P>0.05 is not significant, DF= Degrees of Freedom, S= significant **P \leq 0.01 highly significant ***P \leq 0.001 very high significant

The above table describes the comparison of adults **PSQI** between experimental and control group. In pretest, there was no significant difference between experimental and control group of adults whereas among the post test, there was a significant difference between experimental and

control group of adults **PSQI** score. Especially the greater amount of time that adolescents spend using social media has increased the negative effects on adolescents' general health and well being, including sleep (10,20).

	Group				Mean	Student's paired				
	Pretest	Pretest			Difference	t-test				
PSQI SCORE	Mean	SD	Mean	SD	1					
Experimental(n=40)	8.97	1.14	6.03	1.19	2.94	t=13.63 P=0.001*** DF=39 (NS)				
Control(n=40)	8.75	1.24	8.58	1.07	0.17	t=1.90 P=0.07 DF=39 (NS)				

Table 2 PSQI Score Among	Young Adults	Between Experimental and	Control Group
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NS = Not significant P>0.05 is not significant, DF= Degrees of Freedom, S= significant **P \leq 0.01 highly significant ***P \leq 0.001 very high significant

The above table describes the comparison of experimental and control group PSQI score during Pretest and Post test. In experimental group, there is a significant difference between pretest and post test of adults **PSQI** score, whereas in control group, there was no significant difference between pretest and post test of adults **PSQI** score. The above findings showed significant improvement in sleep quality index scores among the experimental group in comparison with control group. It is important for the development of a healthy generation to educate adolescents about conscious social media and smart phone use and to emphasize the importance of sleep habits (14).

Table 3: ASSOCIATION BETWEEN SLEEP DISTURBANCE REDUCTION SCORE AND ADULTS DEMOGRAPHIC VARIABLES (Experimental group)

		Sleep disturbance reduction score						n	Oneway
	Pretest		Posttest		Reduction score =pre-post			ANOVA F-test/t- test	
Demographic variables		Mean	SD	Mean	SD	Mean	SD		
Age in years	18 Years	9.01	.99	6.72	.96	2.30	.63	14	F=3.25 p=0.05*(S)
	19 Years	9.73	.91	6.03	1.35	3.70	1.93	10	
	20 Years	7.85	1.20	5.26	1.13	2.59	1.07	9	
	21 Years	9.21	.53	5.64	.77	3.57	1.23	7	
Residential	Urban	8.86	1.05	5.93	1.15	2.93	1.29	31	t=0.00 p=0.33(N S)
	Rural	9.33	1.44	6.39	1.32	2.94	1.67	9	
Do you stay in the hostel?	Yes	8.64	1.43	6.33	1.17	2.31	.63	13	t=2.11
	No	9.12	.97	5.88	1.19	3.24	1.52	27	p=0.05*(S)
Type of family	Joint family	8.87	1.52	5.85	1.33	3.02	1.32	9	t=0.19
	Nuclear family	9.00	1.04	6.08	1.16	2.91	1.39	31	p=0.84(N S)
Do you do any Physica activity /Exercise?	Yes	9.01	1.09	5.64	1.19	3.37	1.35	19	t=1.49
	No	8.93	1.21	6.18	1.10	2.75	1.28	21	p=0.14(N S)

Do you have difficulty in falling sleep every night?	Yes	9.25	1.07	6.39	.98	2.86	.99	6	t=025
	No	8.92	1.16	5.97	1.22	2.95	1.43	34	p=0.82(N S)
Do you chat in WhatsApp	Yes	8.86	1.19	5.74	1.16	3.11	1.46	31	t=1.53
every day?	No	9.35	.94	7.02	.62	2.33	.71	9	p=0.13(N S)
Are you day scholar?	Yes	9.04	.96	5.91	1.16	3.13	1.50	27	t=1.29
	No	8.81	1.48	6.27	1.25	2.54	.97	13	p=0.20(N S)
Do you watch YouTube?	Yes	8.96	1.19	5.92	1.19	3.04	1.42	35	t=1.53
	No	9.00	.81	6.80	.92	2.20	.45	5	p=0.13(N S)
Do you play video games?	Yes	9.07	1.15	5.38	1.18	3.69	1.27	7	t=1.64
	No	8.95	1.16	6.17	1.16	2.78	1.35	33	p=0.11(N S)

Above table shows the association between sleep disturbance reduction score and adults demographic variables among experimental group. 19 years old and not stay in hostel adults are gained more sleep disturbance reduction score. It was confirmed using student independent t-test. The extension of periods spent at home by adolescents has led to long periods of exposure to screens, a restriction of outdoor activities, a reduction in peer interactions, unhealthy sleep patterns, and increases in stress and anxiety levels (22,37).

Conclusion

According to the results obtained in the study, the students' scores for social media addiction and quality of sleep were found to be below average, while their sleep quality scores were negatively above. Social media addiction in young adults was positively correlated with conduct and emotional problems, attention deficit/hyperactivity, peer problems and poor sleep quality, and negatively correlated with prosocial behaviors and sleep efficiency (35). Excessive use of the social media become one of the leading challenges of the modern society and causes both physical and mental impairment. Social media has become one of the most significant information resources for adults, its impact is remarkable. It makes countless disturbances in academic performance; quality of sleep, social relationship, emotional well being etc. The present study shows that social media addiction is widely prevalent and has an impact on the sleep which can be improved by strategies as education and family based interventions

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