



**AN OBSERVATIONAL PILOT STUDY ON CORRELATION
BETWEEN SCREEN TIME AND STRESS LEVEL**

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ABSTRACT

The amount of time spent using a screen-equipped device, such as a computer, smartphone, television, or video game console, is known as screen time. The development of children is negatively impacted by screen time both physically and psychologically. Constant exposure of the devices like smart phones among the young people it causes anxiety and stress , it affect the sleep and the symptoms of depression which comes with digital device dependency, screen-time-induced poor sleep quality, and content-influenced negativity. The positive or negative health effects of screen time are influenced by levels and use of it. Screen time is increasing among the people. So, the aim of this study to examine the level of stress associate with the screen time among the young people age between 18-30. The findings demonstrate a strong positive correlation relation between stress level and screen time. In future study can be done in large population.

Keyword: screen time, stress, psychological

INTRODUCTION

The amount of time spent using a screen-equipped device, such as a computer, smartphone, television, or video game console, is known as screen time^[1] The development of children is negatively impacted by screen time both physically and psychologically^[2]. Today's world would be unimaginable without smart phones. Smart phone use in excess is a slow poison. It impairs motivation, efficiency, and concentration of a person. Additionally, it harms eyes^[6] Digital devices and online spaces have become necessity for today's generation. There is more and more advancement coming in the technology which can be used in any part of the world and it is easy to use regardless of age and it is fast acting stimuli which can access easily. There is increased in the purchase of laptop, computer, smart phones and its usage also in present era which have decreased the distance globally now world have become the community resembling the global village. Every individual has been spending their excessive amount of time online which has both positive and negative impact which can be long term and short term. Many reports have been coming showing the effect on sleep, mood and communication with the people due to more addiction towards the virtual world^[5] It has severe effect on general health of the people across the nation. Due to the addiction of the smart phone and other digital gadgets there is increase in the dependency of validation and

the thoughts of the virtual people which leads to the problem with interaction with the families and the closed ones. Overuse of digital media is affected the physical and psychological growth of the young people.

Due to the increasing usage of smart phone young people are going through sleep disturbance, stress, FOMO(Fear of missing out) ,obesity, ADHD(Attention deficit hyperactivity disorder).There is less physical activity and the dietary habit is also affected due to watching advertisement on various digital platform and this generally seen in children and young people. So, by this we can understand the correlation of stress and screen time.^[3]

Previous work done:

1. Screen Time and Mental Health By Dr. Nicola Williams, Ph.D. Reviewed by *Danielle Ellis, B.Sc.*
2. Screen Time and the Brain Digital devices can interfere with everything from sleep to creativity By DEBRA BRADLEY RUDER June 19, 2019.
3. Screen time in children and adolescents: is there evidence to guide parents and policy? By James J Ashton R Mark Beattie Published: March 07, 2019.

Materials and method

Inclusion Criteria:

Healthy individual of age group between 18-30 was selected for the study irrespective of caste and gender , And before the study their consent was taken from the participant.

Objective

- To assess the stress level through perceived stress scale.^[4]
- To assess the screen time of smart phone through digital wellbeing .

Materials

1. Perceived stress scale: A more precise measure of personal stress can be determined by using a variety of instruments that have been designed to help measure individual stress levels. The Perceived Stress Scale (PSS) is a classic stress assessment instrument. This tool, while originally developed in 1983, remains a popular choice for helping us understand how different situations affect our feelings and our perceived stress.

2. Digital wellbeing:

Digital Wellbeing is a dashboard and set of features that gives us detail information about daily usage of phone in hours.

Methodology:

All Participant was examined individually. Informed and written consent was taken. Health assessment was done of every individual to rule out the status of health. Case record form of their personal information was filled by them. Then the level of stress was assessed with the questionnaire of perceived stress scale and then screen time was assessed with the help of digital wellbeing for 2 months. It shows daily usage of smart phone, so the daily usage of smart phone was recorded for the 2 months. Then the average Screen time was taken of 2 months. Then the co-relation of screen time and stress level was assessed.

Observation:

Diagram 1:

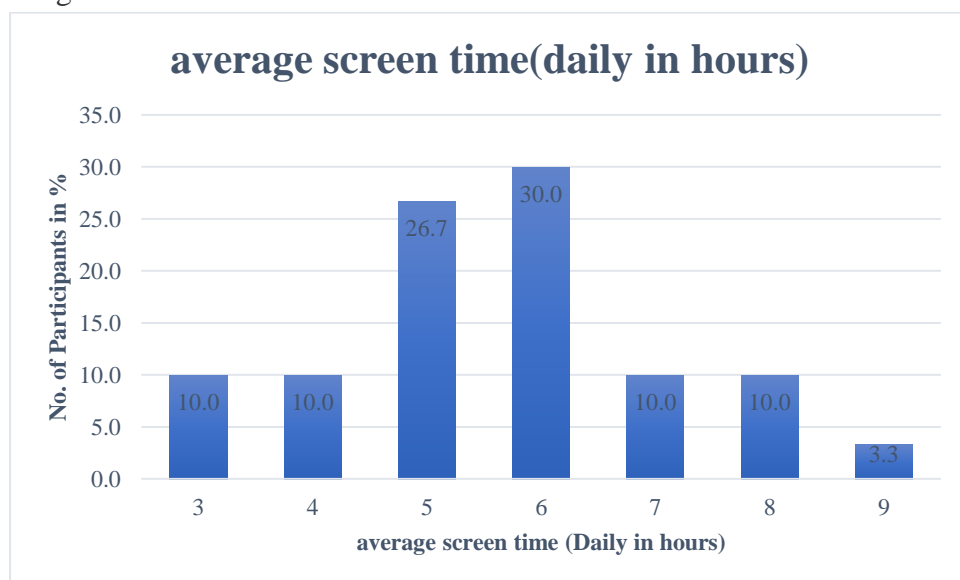
Sex	No. of Participants	%
F	23	76.7

M	7	23.3
Total	30	100.0

Diagram 2:

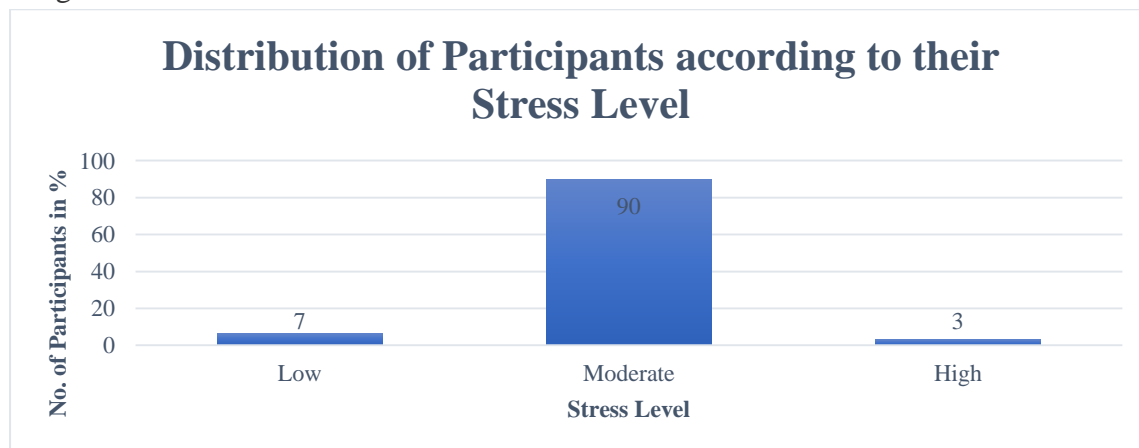
Age (Years)	No. of Participants	%
22	2	6.7
24	4	13.3
25	3	10.0
26	10	33.3
27	7	23.3
28	2	6.7
29	2	6.7
Total	30	100.0

Diagram 3:



Above Bar diagram shows maximum screen time recorded was 9 hours , whereas maximum number of participant have recorded screen time of 6 hours.

Diagram 4:



Above Bar diagram suggests that maximum numbers of participants were having moderate stress level.

Fisher's Exact Test to check Association Between Screen time and Stress Level of the Participants.

Stress Level		average screen time (daily in hours)							Total
		3	4	5	6	7	8	9	
Low	Count	2	0	0	0	0	0	0	2
	Expected Count	0.2	0.2	0.5	0.6	0.2	0.2	0.1	2.0
Moderate	Count	1	3	8	9	3	3	0	27
	Expected Count	2.7	2.7	7.2	8.1	2.7	2.7	0.9	27.0
High	Count	0	0	0	0	0	0	1	1
	Expected Count	0.1	0.1	0.3	0.3	0.1	0.1	0.0	1.0
Total	Count	3	3	8	9	3	3	1	30
	Expected Count	3.0	3.0	8.0	9.0	3.0	3.0	1.0	30.0

Fisher's Exact test performed to check association between average screen time per day and stress level of the participants, test statistics value is 21.31 with p – value 0.002 Which is less than 0.05 (Significance level). we can conclude that there is significance association between average screen time per day and stress level of the participants.

Correlation Coefficient between Screen time and Stress Score of the Participants.

		stress score	average screen time (daily in hours)
stress score	Pearson Correlation	1	.819**
	P - value		0.000
	N	30	30
average screen time (daily in hours)	Pearson Correlation	.819**	1
	P - value	0.000	
	N	30	30

Pearson Correlation coefficient value is 0.819 with p – value 0.000 which is less than 0.05 (Significance level). We can conclude that there is strong positive correlation between average screen time per day and stress level of the participants. i.e., as screen time increased stress level also increased.

Result:

So we can conclude that there is strong positive correlation between average screen time per day and stress level of the individuals, also we can conclude that, as screen time increases stress level also increases.

Discussion:

By this study we know that there is strong positive correlation between screen time and stress level. As the screen time increases there is also increase in the stress level. Loss of focus, feeling lost or confused, disinterest in work, loss of desire, feeling emotionally spent, less social contact, and many more symptoms are some of the psychological impacts of screen time and on the brain. Bacopa Monnier is one of the Medhya Rasayana which enhances memory and reduces stress^[7]

Resilience is a dynamic psycho physiological construct that can be endangered by excessive screen time and digital footprints. Some of the key elements of resilience include physical fitness, societal support, forms of attachment, mindfulness towards issues, and the degree of life pleasure, both temporary and permanent^[3] So it is very important to understand the opportunity and negative effect of smart phone and digital media on every individual. So, there should limiting in the screen time to avoid physical and mental health effect.

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