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Digital Technology's impact on Physical and Mental Well-being of the Students

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ABSTRACT

The use of technology has had a long stretch of rapid growth in the world. The use of internet, social media, owning a Smartphone, tablet has become the necessity of the growing population. The man can go without food a day happily but their heart will broke if there phone or internet will stop for a day. The digital technology has lot of the advantages but at the same time disadvantages too. The well-being of an individual means the state of completely healthy, happy and comfortable. The digital technology has certain impact on the well-being of the people. The present study was conducted to see the exposure of students to the digital technology and to see the impact of that exposure to their physical and mental well-being. The study was conducted in Punjab Agricultural University, Ludhiana. The sample comprises of various undergraduates in the age range of 17-20 years. The random sampling technique was used to select the sample. Self-structured interview schedule was used to assess the socio-personal profile, use of digital technology and physical and mental well-being of the students. The result of the study indicates that the maximum numbers of students were involved in one or more type of digital technology. The physical and mental well-being of the students fell in average level. The more involvement in digital technology was significantly and negatively correlated with the physical and mental well-being of the students.

Key words: Technology, phones, internet, physical, mental well-being

1. INTRODUCTION

Technology is a good servant but a bad master. Technology has an immense effect on the youth these days. The screen time is increasing with passing time. The people these days are living in a virtual reality. On an average a young adult spent about four hours on their smart phones every day. Today the technology has become our body parts. Students use of technology has augmented speedily over the past decade, which raise the question that how time spend on the technology especially the digital technology may affect the individuals in positive and the negative manner (Putnam, 2000)[1]. Talking about the phones and internet they are the first thing in our hand and mind in the morning , while having food, sitting, standing and in between conversation before going to sleep and the

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list is endless. It does affect the mental well-being as well as the physiological health of an individual. Researchers suggest that the children are more engaged in virtual reality that has affected their social interaction as well as well-being (George and Odgers, 2015) [2].

Some researchers found that the time that is spent in front of the screen was highly correlated with the less physical activity. However some also have disagreement with this and suggests that reducing the exposure to technology will not necessarily stimulate children to spend more time on physical activity. It is very important to come out with the measures that can find out whether reductions in screen time lead to increases in good health. Bishop and Przybylski 2015 [3] suggest the matter is no longer people are using digital technology, but how, why, and with what effects.

Evidently, the technology has a lot of benefit as they connect the students with the world, allow them to explore, learning different things and help them in achieving their goals (Livingstone and Bober, 2006) [4]. On contrary there are genuine concerns about how the students are interacting with the outer world are they experiencing any type of cyber-bullying or are they using age appropriate content (Boyd and Hargittai, 2013)[5].

The rise in digital technology has also challenges the role of parents as it is very difficult to for them to have a balance between the exploration and the deterioration of their children (Pew Research Center, 2016) [6]. The feeling of depression and suicidal tendency has also some association with the digital technology (Ferguson (2017) [7]. Little research shows the specific pathways through which technology use may have these impacts, particularly in the area of well-being. So keeping all these points in mind the following study has been framed to:

2. OBJECTIVE

- 2.1 To assess the use of digital technology among the college students
- 2.2 To assess the physical and mental well-being of the students
- 2.3 To see the impact of digital technology on physical and mental well-being of the students.

METHODOLOGY

- 3.1 Local of the study: The study was conducted in Punjab Agricultural University, Ludhiana, Punjab.
- 3.2 Sample selection: The sample comprises of college students from various undergraduate programmes of Punjab Agricultural University, within the age range of 17-20 years, random sample technique was used to select the sample. Thus, comprising total 100students (50 boys and 50 girls).
- 3.3 Research tools used:
 - 3.3.1 A self-structured interview schedule was used to assess the socio-personal information of the students
 - 3.3.2 A self-structured instrument was used to assess the use of digital technology by the students
 - 3.3.3 A self-structured instrument was used to assess the physical and mental well-being of the students.

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3.4 Statistical analysis: Frequency, Percentage, Z- test and Correlation was used to analyze the data.

4. RESULTS AND DISCUSSION

Table 4.1: Socio-personal characteristics of the respondents

Variables		Boys (n ₁ =50)		Girls(n ₂ =50)		Total sample (n=100)	
		f	%	f	%	f	%
Maternal education	Illiterate	2	4	6	12	8	8
	Matriculate	10	20	15	30	25	25
	Intermediate	18	36	10	20	28	28
	Graduate	12	24	12	24	24	24
	Post graduate	8	16	7	14	15	15
Paternal education	Illiterate	5	10	9	18	14	14
	Matriculate	10	20	8	16	18	18
	Intermediate	17	34	10	20	27	27
	Graduate	11	22	15	30	26	26
	Post graduate	7	14	8	16	15	15
Maternal occupation	Homemaker	30	60	33	66	63	63
	Business	2	4	3	6	5	5
	Job (Private/Govt.)	18	36	14	28	32	32
Paternal occupation	Business	25	50	18	36	43	43
	Farming	10	20	15	30	25	25
	Job (Private/Govt.)	15	30	17	34	32	32
Family income	10-25k	7	14	4	8	11	11
	25-50k	10	20	20	40	30	30
	50k or above	33	66	26	52	59	59

The data presented in the table 4.1 depicts the socio-personal characteristics of the respondents. The data revealed that 28 per cent of the students mothers were literate upto intermediate followed by, matriculate (25%), graduate (24%), post graduates (15%) and only 8 per cent were illiterate. The data relating paternal education depicts that 27 per cent of the fathers of the respondents were educated upto intermediate followed by, 26 per cent graduates, 18 per cent matriculate, and 15 per cent post graduates and 14 per cent were illiterate.

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Moving towards the maternal occupation the data revealed that a major proportion of the students were homemaker (63%) followed by, engaged in job (32%) and business (5%). Paternal occupation data revealed that 43 per cent of the fathers were engaged in business followed by, jobs (32%) and farming (25%).

The family income data showed that more than half of the students (59%) family income was 50k or above followed by, 25-50k (30%) and 10-25k (11%).

Table 4.2: Distribution of students as per the exposure to the digital technology

Variables	Frequency	Boys(n ₁ =50)		Girls(n ₂ =50)		Z- value	Total sample (n=100)	
		f	%	F	%		f	%
Mobile phones	Yes	50	100	50	100	0.00	100	100
	No	0	0	0	0	0.00	0	0
Free Internet	Yes	49	98	50	100	1.00	99	99
	No	1	2	0	0	1.00	1	1
Various social media account (facebook, twitter, instagram)	Yes	48	96	50	100	1.42	98	98
	No	2	4	0	0	1.42	2	2
Time spent daily in front of screen	1-2 hours	5	10	3	6	0.73	8	8
	2-3 hours	10	20	8	16	0.52	18	18
	3 -4 hours	35	70	39	78	0.91	74	74

The data presented in the table 4.2 illustrates the distribution of the students as per the exposure to the digital technology. The data revealed that the all the boys and the girls use mobile phone (100%,each) majority of the respondents had free internet (99%). The majority of students have various social media accounts (98%) and a major proportion of the students spend about 3-4 hours in front of the screen (74%).

Further, the data depicts the gender difference in use of digital technology and statistically non-significant differences exist between boys and girls. Hence, it can be concluded that majority of the respondents were exposed to digital technology and boys and girls were at same platform in using technology.

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Table 4.3. Distribution of students as per their physical and mental well-being

Variables		Boys(n ₁ =50)		Girls(n ₂ =50)		Z-value	Total sample (n=100)	
		f	%	f	%		f	%
Involvement in any kind of physical activity	Yes	20	40	35	70	3.01**	55	55
	No	30	60	15	30	3.01**	45	45
Overweight	Yes	30	60	33	66	0.62	63	63
	No	20	40	17	34	0.62	37	37
Wear glasses	Yes	17	34	14	28	0.64	31	31
	No	33	66	36	72	0.64	69	69
Sleeplessness	Yes	39	78	33	66	1.33	72	72
	No	11	22	17	34	1.33	28	28
Anxiety/ stress	Yes	25	50	30	60	1.00	55	55
	No	25	50	20	40	1.00	45	45
Do you have friends	Yes	45	90	47	94	0.73	92	92
	No	5	10	3	6	0.73	8	8
Satisfied with parents	Yes	41	82	46	92	1.48	87	87
	No	9	18	4	8	1.48	13	13
Give value to self	Yes	39	78	48	96	2.67**	87	87
	No	11	22	2	4	2.67**	13	13
Feel sad all the time	Yes	10	20	18	36	1.78	28	28
	No	40	80	32	64	1.78	72	72
Happy with your life	Yes	42	84	38	76	1.00	80	80
	No	8	16	12	24	1.00	20	20

**1% level of significance

The data furnished in the table 4.2 elucidated that distribution of students as per their physical and mental well-being. The data depicted that 40 per cent of the boys and 70 per cent of the girls were involved in physical activity. The overall data revealed that more than half of the respondents (55%) were involved in physical activity. While data regarding overweight depicts that 60 per cent of the boys, 66 per cent of the girls and overall 63 per cent of the students were overweight. Only 34 per cent of the boys, 28 per cent girls and overall 31 per cent of the students wear glasses. More than half of the students experienced anxiety/ stress (55%). Majority of the students had friends (92%). A substantial number of students were satisfied with their parents (87%). Also majority of the

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students has self-worth (87%). Only 28 per cent of the students were sad about their life and majority of the students were happy with their life (80%).

Further, the gender wise difference data showed that significant gender differences were observed in giving value to themselves where females outnumbered males. They have more self-worth than their male counterparts.

Table 4.4: Correlation between digital technology and physical and mental well-being of the students

Variables	Mobile phones	Free Internet	Various social media account (facebook, twitter, instagram)	Time spent daily in front of screen
Involvement in any kind of physical activity	0.71**	0.60**	0.78**	0.82**
Overweight	0.68*	0.75**	0.58**	0.65**
Wear glasses	0.62**	0.75**	0.72**	0.72**
Sleeplessness	0.72**	0.82**	0.89**	0.72**
Anxiety/ stress	0.80**	0.72**	0.74**	0.02
Do you have friends	-0.64**	-0.69**	- 0.63**	- 0.75**
Satisfied with parents	0.78**	0.11	0.05	- 0.73**
Give value to self	-0.40**	0.01	-0.81**	- 0.68**
Feel sad all the time	0.58*	0.03	0.07	0.008
Happy with your life	-0.63*	0.05	0.003	- 0.79**

The data presented in the table 4.4 highlights the correlation of the various aspects of digital technology and the physical and mental wellbeing of the students. The data revealed that almost all of the negative aspects of physical and mental well-being were significantly and positively correlated with the aspects of digital technology which indicates that the more will be the exposure to the digital technology the less will be the physical and mental well-being of the students.

Use of mobile had significant positive correlation with less physical activity ($r=0.68$), overweight ($r=0.68$), wearing glasses ($r=0.621$), sleeplessness ($r=0.72$), anxiety/stress ($r=0.80$), parental satisfaction ($r=0.78$), sadness ($r=0.58$).

Similarly, free internet services had significant positive relation with less physical activity ($r=0.60$), overweight ($r=0.75$), wearing glasses ($r=0.75$), sleeplessness ($r=0.82$) and anxiety/stress ($r=0.72$).

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Various social media accounts had positive significant correlation with less physical activity ($r=0.78$), overweight ($r=0.89$), wearing glasses ($r=0.72$), sleeplessness ($r=0.89$) and anxiety/stress ($r=0.74$).

Time spent in front of screen is positively and significantly correlated with less physical activity ($r=0.82$), overweight ($r=0.65$), wearing glasses ($r=0.72$), and sleeplessness ($r=0.72$).

However, the positive aspects of physical and mental well-being were significantly and negatively correlated with the use of digital technology which signifies the less will be the exposure to the digital technology the more sound will be the physical and mental well-being of the students.

Number of friends had significant negative correlation with use of mobile ($r= -0.64$), free internet ($r= -0.69$), various social media accounts ($r= -0.63$) and time spent in front of screen ($r= -0.75$).

Happiness had significant negative correlation with use of mobile ($r= -0.63$), and time spent in front of screen ($r= -0.79$).

5. SUMMARY AND CONCLUSION

From the foregoing analysis of the data it can be concluded that the students were having more exposure to the technology. They spend a generous amount of time with the digital technology. Further, the data also found that the students were low in the physical and the mental wellbeing. The physical and mental well-being was significantly and negatively correlated with the use of digital technology.

Thus, it can be concluded that the more exposure to the digital technology can hamper the physical and mental well-being of the students. So, it is very important for the parents and the mentors to check upon the exposure of the students to the digital world and as well as to take care of their wellness.

Limitations: The study can be conducted on varied sample and more variable can be covered.

Suggestions: The workshops and the awareness programmes can be started to give students the positive and as well as negative effects of the digital technology. Through which they can learn to make a balance between the technology and well-being.

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