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How internet affects physical health of senior secondary students

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Abstract
Since children are a country's future, it is crucial to comprehend their needs to protect that future. Technology use could have both positive and negative effects. Studying the impact of internet usage among students enrolled in school is urgently needed. The use of technology is a revolutionary symbol and the present study also aids in accessing their internet usage patterns and will also help to understand the use or misuse of technology by our future generation. Therefore, the study will focus on the use of the Internet with positive and negative impact on their physical health. Four hundred school-going adolescents were selected from four different blocks of Sonepat district of Haryana. These blocks *viz*. Gannaur, Kharkhoda, Gohana and Sonepat were selected purposively by the researcher.

Keywords: Internet, physical health, positive and negative impact of internet adolescent

1. Introduction
Internet nowadays has become a necessity of life. Its excessive use not only results in addiction but also physical exertion. The high internet usage directly and indirectly shows effect on internet addiction levels among secondary students. Moreover, a significant difference was found between fail and pass academic averages in relation with their internet addiction among them. Daraha (2013) [3] explored the effects of the Internet on the health of students. The findings showed that the high school students had health problems like strain in eyes, back pain and headache (tension or migraine), increased weight and physical pains due to spending more time on the Internet. More internet usage not only results in anxiety, eye related traumas and unnecessary eye strain due to excessive hours, screen glare, poor sitting posture and too close distance. Looking down at the screen for long hours also result in back pain, spondylitis, elbow pain, wrist and hand muscles problems. Declined physical activity also results in obesity. Prolonged stress can also result in other related issues such as diabetes, cancer, hormonal imbalance etc. Berner *et al*. (2010) [1] observed that those students who spend at least 3 hours on the Internet have low vision in comparison to those who spent their most time in physical activities. Further it was added that low vision was associated with heavy internet usage for longer duration, reclining and having high BMI. The current study, which included 400 school-age adolescent respondents, was carried out in Sonepat to determine the severity of the issue.

2. Objective of the Study
To study the positive and negative impact of the internet physical health on senior secondary students in sonepat

3. Data collection process
The survey method was used to gather the data. The information was gathered using a Google form because of the COVID-19 pandemic. The prepared questionnaire was uploaded on Google form and the link was shared with the students using WhatsApp mobile application and email. After collecting the data, it was analyzed by calculating frequency and percentages.

4. Population of the study
The population of the study comprised of those adolescents who study in Eleventh and

Twelfth standards and live in Haryana. Other recent studies and trends indicate that there is a rise in young internet users, particularly school-age children. A leading data consulting and marketing research company in India also mentioned in their report titled "ICUBETM 2019" that the COVID-19 pandemic has accelerated the growth of internet usage in India. Social distancing and lockdown are the main reason that pushed people to use the Internet for new and varied purposes. In the upcoming years will have children and housewives as the new internet adopters. (In IANS, 2020).

5. Limitations of the study

- Sample size is limited to 400 senior secondary students
- The area is restricted Sonepat district only.
- The results and analysis of data is purely based on responses of respondents.

6. Sample of the study

The study's sample was chosen using convenient, multistage, and purposeful sampling methods. For this study, four hundred school-going adolescents were selected from four different blocks of Sonepat district of Haryana. These blocks *viz*. Gannaur, Kharkhoda, Gohana and Sonepat were selected.

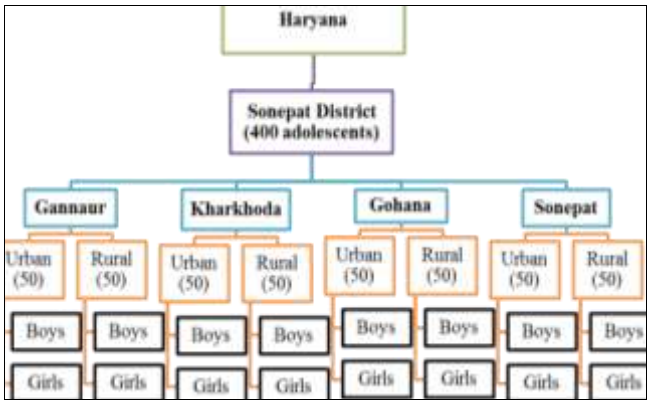

Fig 1: Sampling plan for the present study

7. Result and Discussion

Table 1: Overall Impact of Internet on Physical Health of Senior Secondary Students (N=400)

Impact on Physical Health	Frequency	Percentage (%)
High	119	29.75
Moderate	195	48.75
Low	86	21.50

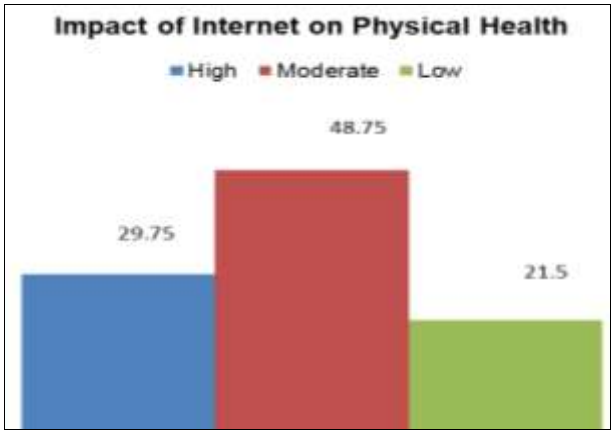

Fig 2: Percentage Distribution of Senior Secondary Students According to the Impact of Internet on their Physical Health (N=400)

Table 1. Presents the data regarding the Overall impact of internet on the physical health of senior secondary students showed that nearly half of them had moderate impact (48.75%) of internet on their physical health. However, thirty percent of them had high impact and a little more than one fifth (21.5%) of them had low impact of internet on their physical health. The data indicates that the selected adolescents' physical health was being affected through internet.

Table 2: Intensity indices for the Impact of Internet on Physical Health of Senior Secondary Students (N=400)

Impact	Statement	I.I.
High Impact	Internet boost the zeal to stay fit	3.87
Moderate Impact	Follow fitness experts on Internet to maintain fitness.	3.54
	Read nutrition related articles on internet and consume food consciously	3.36
	Go to sleep after spending some time on Internet.	3.29
	Felt irritation in eyes while watching something on internet.	3.28
	Count steps using fitness app on mobile.	3.25
	Suffer from head ache after spending time on internet.	3.18
	Used internet to learn home remedies to get rid of puberty related skin issues	3.10
	Suffer from back ache caused by spending more time on Internet in sitting position.	3.09
	Gaining weight as the virtual engagement did not allow to spend time on physical activity.	2.95
	Suffer from ear related issues due to use of earphones while using the internet.	2.82
	Unable to sleep well due to high internet usage	2.71
Low impact	Statement	Nil

Table 2. Shows the intensity indices for the impact of internet on the physical health of senior secondary students. The intensity indices ranged from 3.87 – 2.71 and showed high to moderate impact of internet on their physical health. It showed that the internet had high impact on maintaining the zeal among the students to stay fit (3.87). The impact of internet was moderate for following fitness expert to maintain fitness (3.54) also for reading nutrition related articles to stay updated with healthy diet (3.36). Another healthy habit that the students had agreed to have moderate impact of internet was "Count steps using fitness app on mobile". (3.25) This shows that internet was helping the adolescents to maintain their healthy lifestyle. The students also agreed that the internet helped them moderately to learn home remedies to get rid of puberty related issues (3.10). This suggest that the senior secondary students were using internet to learn home remedies for basic puberty related issues like pimples, mood swings, rashes on skin, hair growth on skin and so on.

Moreover, the findings also showed that the internet had moderate impact on their unhealthy habits. The statements

that showed moderate impact on internet were-

- Go to sleep after spending some time on Internet. (3.29)
- Gaining weight as the virtual engagement did not allow to spend time on physical activity. (2.95)
- Head ache after spending time on internet. (3.18)
- Back ache caused by spending more time on internet in sitting position. (3.09)
- Ear related issues due to use of earphones while using the internet. (2.82)

This indicates that the excessive use of internet was causing unhealthy routine habits among the senior secondary students. These unhealthy habits might lead to sever physical health related issues in future. Furthermore, the table 31 showcased the students were suffering from various physical health related issues and internet had moderate impact upon them. They were-

- Irritation in eyes while watching something on internet. (3.28)

This finding shows that the internet was affecting the physical health of the senior secondary students. They were suffering from various health issues such as head ache, irritation in eyes, ear related issues and back ache due to their internet usage. The low impact of internet was found for the statement "unable to sleep well due to high internet usage" (2.71). This means, the internet was not affecting their sleep time and had low impact on that.

Table 3: Differences in Impact of Internet on Physical Health of Senior Secondary Students (N=400)

Variables	Source of Variance	Sum of Squares	DF	Mean Square	F	Sig.
Age	Between Groups	4.3104	2	2.1552	3.787*	0.023
	Within Groups	225.929	397	0.5691		
Stream of Study	Between Groups	0.8746	2	0.4373	0.756	0.469
	Within Groups	229.365	397	0.5777		
Mother's Education	Between Groups	4.0714	3	1.3571	2.376	0.069
	Within Groups	226.168	396	0.5711		
Father's Education	Between Groups	2.9256	3	0.9752	1.729	0.159
	Within Groups	320.2978	568	0.5639		
Mother's Occupation	Between Groups	2.252	2	1.126	1.960	0.142
	Within Groups	227.9883	397	0.5743		
Father's Occupation	Between Groups	1.2149	3	0.405	0.700	0.552
	Within Groups	229.0254	396	0.5783		
Number of	Between Groups	7.6011	2	3.8006		
Family Members	Within Groups	222.6391	397	0.5608	6.7769 **	0.01
Type of Family	Between Groups	6.3623	2	3.1811	5.6410 **	0.01
	Within Groups	223.878	397	0.5639		
Number of Siblings	Between Groups	2.3861	3	0.7954	1.3823	0.247
	Within Groups	227.8541	396	0.5754		
Internet Usage	Between Groups	22.5965	2	11.298	21.601 **	0.01
	Within Groups	207.6437	397	0.523		

**p<0.01, *p<0.05

Table 3 represents the analysis of variance for differences in the impact of the Internet on the physical health of senior secondary students of Sonepat district. The significant difference was observed in the same among the students in relation to their age, number of family members, type of family and their internet usage. This indicates that the Internet had a similar impact on the physical health of senior secondary students irrespective of their age, number of family members, type of family and their internet usage. Regarding their academic field, parent's educational level, parent's occupation, and the number of siblings, senior secondary students in Sonepat district did not exhibit any discernible differences in the effects of the Internet on their physical health.

The current study's findings showed that the Internet had both positive and negative effects on senior secondary students' physical health. It indicated that enhance their zeal to maintain their fitness and adolescents keep themselves updated with health -related information by using Internet. They were also facing problems like irritation in eyes, lack of sleep, head ache and back ache and also weight related issues due to the use of Internet (table 3).

Table 4: Post Hoc Tukey's HSD Comparison for Impact of Internet on Physical Health of Senior Secondary Students (N=400)

Variables	Categories	Mean	HSD (Mean Diff.)	Sig.
Age	Adolescents (2.74)	Old Adolescents (3.28)	0.54 **	Q = 4.20 p = 0.01
Type of Family	Nuclear (3.31)	Extended (2.99)	0.32**	Q = 4.47 p = 0.01
Number of Family Members	4 or less (3.36)	5-7 members (3.13)	0.23*	Q = 3.37 p = 0.04
		More than 7 (3.02)	0.35**	Q = 5.02 p = 0.01
	High Usage (3.61)	Moderate Usage (3.33)	0.27*	Q = 3.44 p = 0.04
Internet Usage		Low Usage (2.92)	0.69**	Q = 8.71 p = 0.01
	Moderate Usage (3.33)	Low (2.92)	0.42**	Q = 5.26 p = 0.01

**p<0.01, *p<0.05

Table 4: depicted that the significant differences in the impact of the Internet on the physical health of the senior secondary students in the categories of variables. It showed that there were significant differences existed between adolescents (2.74) and old adolescents (3.28, p=0.01), the mean score of old adolescents was higher in comparison to the adolescents indicating higher impact on old adolescents on their physical health. Furthermore, the significant differences were observed

in the adolescents who belonged to nuclear family (3.31) and those who belonged to extended families (2.99, p=0.01). Those who were living in the small family with 4 or less family members (3.36) were significantly had higher impact of Internet than those who were living with the medium family size i.e., 5-7 members (3.13, p=0.05) and large family size i.e. more than 7 members (3.02, p=0.01). Those, who high (3.61) and moderate (3.33) internet users had higher impact of Internet on the same in comparison to those who had moderate usage (p=0.05) and low usage (2.92, p=0.01) respectively. Moreover, it showed that those students who belonged to younger age group i.e., adolescents, nuclear as well as small family, had high to moderate internet usage had significantly higher impact of Internet on their physical health in comparison to other age group.

8. Conclusion

Study showed that nearly half of them had a moderate impact (48.75%) of Internet on their physical health. However, thirty percent of them had high impact and a little more than one fifth (21.5%) of them had low impact of Internet on their physical health. The data indicates that the selected adolescents' physical health was being affected through Internet. Moreover, the findings also showed that the Internet had a moderate impact on their unhealthy habits. The statements that showed moderate impact on internet were-

- Go to sleep after spending some time on the Internet. (3.29)
- Gaining weight as the virtual engagement did not allow to spend time on physical activity. (2.95)

Furthermore, the significant differences were observed in the adolescents who belonged to nuclear family (3.31) and those who belonged to extended families (2.99, p=0.01). Those who were living in the small family with 4 or less family members (3.36) were significantly had higher impact of Internet than those who were living with the medium family size i.e., 5-7 members (3.13, p=0.05) and large family size i.e., more than 7 members (3.02, p=0.01). The current research came to the conclusion that the Internet had both positive and negative effects on the physical health of senior secondary students. It indicated that enhance their zeal to maintain their fitness and adolescents keep themselves updated with health -related information by using Internet. They were also facing problems like irritation in eyes, lack of sleep, head ache and back ache and also weight related issues due to the use of Internet (table 3). Those, who high (3.61) and moderate (3.33) internet users had higher impact of Internet on the same in comparison to those who had moderate usage (p=0.05) and low usage (2.92, p=0.01) respectively. Significant difference was observed in the physical health among the students in relation to their age, place of living, number of family members, type of family and their internet usage

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