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Assess the Knowledge Regarding Impact of Mobile Phone and Internet Use among High School Students at Vadodara, Gujarat 2022 - A Cross-Sectional Study

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ABSTRACT
The telecommunications industry is expanding rapidly, with smart phones currently enjoying the greatest level of popularity. Young people, particularly college-bound students, used their smart phones more frequently. They utilize a range of smart phone brands with various characteristics. People prefer using smart phones to glued and push-button phones. The ability to access social media, the internet, and email from anywhere at any time thanks to the development of "smart" mobile phones, as well as the availability of practical features like Bluetooth and "Apps" to users, have all helped to increase the use of smart phones across the board. Currently, smart phones are more than simply phones for making calls and sending texts; they are essentially small computers with internet access. The majority of smart phone users are college students who pursue higher education. To assess high school pupils' knowledge of the effects of internet and mobile phone use. A school based descriptive study was conducted from January to February, 2022.Vadodara university facilities were included. Grade 9 and 10 grade students were requited for study. Data from a self-administered survey was entered into Epi Data, and SPSS was used to analyzed it. Analyses of the associations between dependent and independent variables are offered, together with discussion of both descriptive and inferential statistics. Among the graduate students, 25 (41.7%) were in the 14–15 age range, 19 (31.7%) were in the 16–17 age range, and 16 (26.7%) were in the over–18 age range. With regards to the do you have mobile phone 55(91.7%) were yes have mobile phone and only 5(8.3%) were not have mobile phone. Class studying in 37(61.7%) were 10 Grader and 23(38.3%) were 9th grade. majority 26 (43.3%) of study subjects had Poor knowledge and 20(33.3%) of study subjects had Average knowledge and 14 (23.4%) of them had good knowledge regarding internet and mobile phone use. majority 26 (43.3%) of study subjects had Poor knowledge and 20(33.3%) of study subjects had Average knowledge and 14 (23.4%) of them had good knowledge regarding internet and mobile phone use. The main conclusion of the current study was that users of smart phones should refrain from using them excessively and take sufficient efforts to prevent experiencing negative health impacts if they are adequately aware of the health concerns connected with doing so.
Keywords: Knowledge, Mobile phone, Internet use, High school

INTRODUCTION:

By surpassing 829 million active smart phone users in 2022, India overtook the US as the second-largest smart phone user globally. Technology development today is essential to every person's existence on planet. Youth in our community, in particular, are constantly eager to adapt any changes made in the area of communication technology. A smart phone is seen as a crucial communication tool and has become a necessity for most individuals. People prefer using smart phones to glued and push-button phones.[1] Making mobile devices "smart" to provide access to social media, the internet, and email anywhere and at any time, as well as putting various functionalities like Bluetooth and GPS at users' fingertips "Apps" were a major factor in the increased use of smart phones across the board. Currently, smart phones are more

than simply phones for making calls and sending texts; they are essentially small computers with internet access. Students use smart phones mostly to pursue higher education.[2]

"The advancement and modernization of technology have improved social well-being and made people's life easier. People are using smart phones more frequently as a result of the emergence of electronic governance and government of India encouragement of electronic commerce. Advances in information technology have a significant global impact on higher education and learning, but so far they have also created certain issues and concerns due to teens and young adults' careless usage of smart phones.[3] Wireless One of the world's fastest spreading media is now communication. emerging mobile youth culture that communicates primarily through thumbs rather than speech. People are increasingly more likely to include the mobile phone as a participant in what would otherwise be a face-to-face dyad, according to a study. "The spread of mobile phones is affecting people's lives and relationships and affects how people interact when face to face or, rather and increasingly, face -to face-to-mobile-phone-face," it was found. based on Katz and Aakhus (2002), a mobile phone is a necessary component of modern life and its absence is simply seen as odd. By 2020, everyone will have access to advanced mobile technology, 90% of the population is covered by mobile broadband networks, while 70% of people use smartphones. Products like mobile phones, smart phones, and touch screen devices have entered people's daily lives thanks to the technology sector's long-term expansion. A smart phone is a mobile phone with the ability to run sophisticated applications, surf the internet, and allow users to download and run software. The most fundamental uses for which phones were initially acquired are calling and texting, However, today's mobile devices are utilized for communication and entertainment, or commuteainment.[4] Everyone is now thinking about acquiring a smart phone because kids can use them for anything from downloading and reading study materials in various MS Office formats to watching films live streamed from across the world through Google and other sites that are free to students. These technologies have both benefits and drawbacks in terms of their price, use, environmental impact, and health and social issues. Health Concerns with Smart Phones 1) Constant and extended use of smart phones may have some general or common health effects, such as, The biggest ones include headaches, frustration from continual mobile device use, and a lack of attention during daily activities. Using a mobile device excessively can generate anxiety due to the constant influx of news, which can eventually cause eye strain, appetite loss, weariness, and hearing loss.[5]

MATERIAL AND METHODS
Research area and duration:
Research was conducted in the high school of Vadodara district, Gujarat state.
Research design:
A Institutional-based cross-sectional study was conducted among High school students in the Vadodara, Gujarat.
POPULATION
Study population: All high school students currently enrolled in ninth- and tenth-grade courses were the population source.
High school students who were enrolled in classes in Vadodara's 9th and 10th grades and available during the data collecting period made up the study population.
INCLUSION CRITERIA:
All **High school students** in the Vadodara.
EXCLUSION CRITERIA:
Students who were on holiday, sick leave were excluded from the study.
SAMPLE SIZE
60 high school Students.
RESULTS
DEMOGRAPHIC VARIABLES OF THE STUDY PARTICIPANTS
According to data in Table 1, the majority of high school students were between the ages of 14 and 17, while 19 (31.7%) and 16, respectively, and 16, (26.7%), were between the ages of 16 and 18. Regarding the religion of high school students, there were approximately 28 (46.7%) graduates who identified as Hindu, 24 (40%) who identified as Christian, and 8 (13.3%) who identified as Muslim. Regarding the gender of the under graduate students 44(73.3%) were male, 16 (26.7%) were female students. Regarding the area of residence 40(66.7%) were urban residence, 20(33.3%) were rural residence. With regards to family monthly income of under graduate students 24(40%) were income more than Rs10000 to 20,000, 21(35%) were income less than Rs 10,000 and 15(25%) were income less than Rs 20000.With regards to education of father of high school students 22(36.7%) were higher secondary,16(26.7%) were graduation and above,11(18.3%) were high school,8(13.3%) were primary school and 3(5%) were non

formal education. With regards to education of mother of high school students 20(33.3%) were higher secondary, 17(28.3%) were high school,9(15%) was primary school,7(11.7%) were graduation and non formal education. With regards to the do you have mobile phone 55(91.7%) were yes have mobile phone and only 5(8.3%) were not have mobile phone. Class studying in 37(61.7%) were 9th grade and 23(38.3%) were 10th grade.

TABLE 1 : DISTRIBUTION OF UNDERGRADUATE STUDENTS' DEMOGRAPHIC FACTORS BY FREQUENCY AND PROPORTION N=60

S. No	Demographic Variables		frequency	Percentage
1	Age(in years)	14-15	19	31.7
		16-17	25	41.7
		>18	16	26.7
2	Religion	Hindu	28	46.7
		Christian	24	40.0
		Muslim	8	13.3
3	Sex	Male	44	73.3
		Female	16	26.7
4	Area of residence	Rural	20	33.3
		Urban	40	66.7
5	Family Monthly income	Less than 10,000	21	35.0
		Rs10,000-20,000	24	40
		Above Rs.20,000	15	25
6	Type of family	Joint	16	26.7
		Nuclear	26	43.3
		Extended	18	30
7	Education of father	Non formal education	3	5
		Primary School	8	13.3
		High School	11	18.3
		Higher secondary	22	36.7
		Graduation and above	16	26.7
8	Education of mother	Non formal education	7	11.7
		Primary School	9	15
		High School	17	28.3
		Higher secondary	20	33.3
		Graduation and above	7	11.7
9	Do you have mobile Phone	Yes	55	91.7
		No	5	8.3
10	Class studying in	9 th Grade	23	38.3
		10 th Grade	37	61.7
	Total		**60**	**100**

ASSESS THE KNOWLEDGE LEVEL OF HIGH SCHOOL STUDENTS REGARDING INTERNET AND MOBILE USE
In order to find out the level of pretest knowledge of Graduate students in three range category was used.
 Categorization on the basis of the level of knowledge which is as follows;
1-8 Poor knowledge
9-16 Average knowledge
17-24 Excellent knowledge

TABLE II: KNOWLEDGE LEVEL OF HIGH SCHOOL STUDENTS REGARDING INTERNET AND MOBILE USE

Level of knowledge	Ranges of scores	No of study subjects	Percentage
Poor knowledge	1-8	26	43.3
Average knowledge	9-16	20	33.3
Excellent knowledge	17-24	14	23.4

Table 2 shows that the majority 26 (43.3%) of study subjects had Poor knowledge and 20(33.3%) of study subjects had Average knowledge and 14 (23.4%) of them had good knowledge regarding internet and mobile phone use.
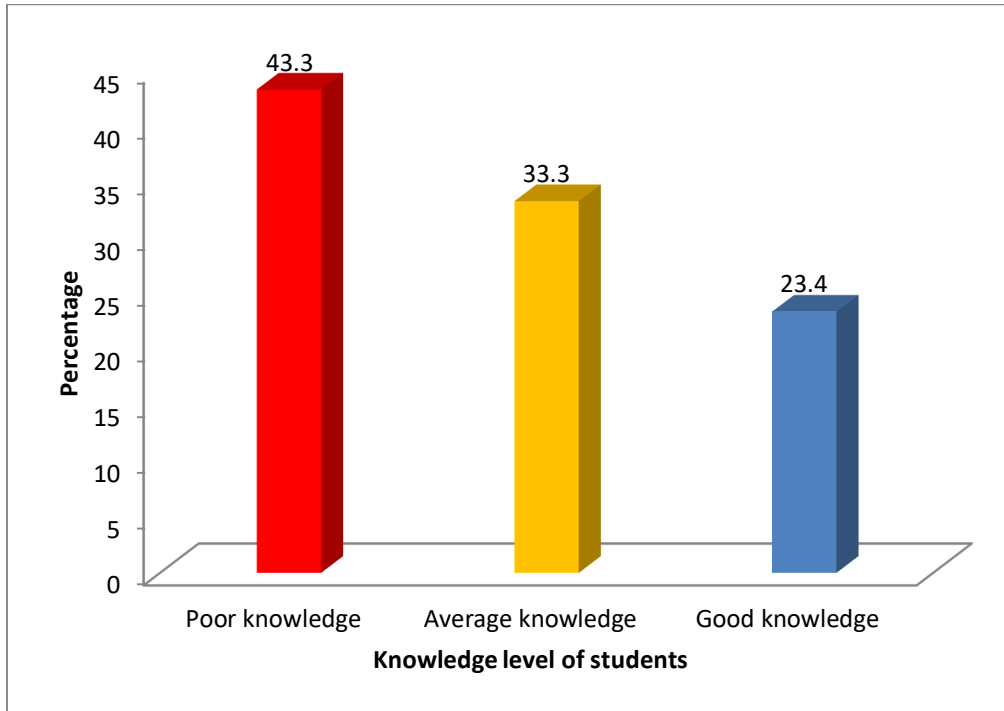
Fig:1: Knowledge level of students

Table 2: ASSOCIATION BETWEEN KNOWLEDGE SCORE OF HIGH SCHOOL STUDENTS REGARDING INTERNET AND MOBILE USE WITH SELECTED SOCIO-DEMOGRAPHIC VARIABLES.   N=60

Demographic Variables		Level of knowledge			χ^2 value	df	p value
		Poor	Average	Good			
Age (Years)	14-15	9	6	1	0.822a	2	0.663NS
	16-17	10	10	6			
	>18	7	4	7			
Religion	Hindu	10	5	3	1.741a	2	0.419 NS
	Christian	12	10	5			
	Muslim	4	5	6			
Gender	Male	16	14	7	0.812a	1	0.527NS
	Female	10	6	7			
Area of residence	Rural	10	10	8	1.250a	1	0.264 NS
	Urban	16	10	6			
Family Monthly income	Less than 10,000	6	5	3	1.523a	2	0.467NS
	Rs10,000-20,000	10	10	5			
	Above Rs.20,000	10	5	6			
Type of family	Joint	10	10	3	1.927a	2	0.382NS
	Nuclear	13	5	8			
	Extended	3	5	3			
Education of father	Non formal education	3	3	2	9.124a	4	0.048 S*
	Primary School	6	5	3			
	High School	7	3	2			
	Higher secondary	6	4	3			
	Graduation	4	5	4			

(Continued Table:3)

Demographic Variables		Level of knowledge			χ^2 value	df	p value
		Poor	Average	Good			
Education of mother	Non formal education	6	2	4	4.324[a]	4	0.364[NS]
	Primary School	3	2	3			
	High School	3	4	5			
	Higher secondary	10	3	2			
	Graduation	4	3	0			
Do you have mobile Phone	Yes	32	23	0	0.909[a]	1	0.340 [NS]
	No	4	1	0			
Class studying in	BBA 1ST Year	11	9	8	2.303[a]	1	0.177[NS]
	BBA 2ND Year	15	11	6			

*P<0.05 LEVEL OF SIGNIFICANT ASSOCIATION, S- SIGNIFICANT NS-NON SIGNIFICANT
The **table 3** showed that education of the father significant association with knowledge score of high school students regarding internet and mobile use p<0.05 hence null hypothesis accepted. Socio-demographic variables like Age, religion, gender, area of residence, family monthly income, type of family, education of mother, having mobile phone, class studying in were no significant association with knowledge score of high school students regarding internet and mobile use.

DISCUSSION
This innovative study's goal was to assess the advantages and disadvantages of smart phone use among high school students, with a particular emphasis on how it can affect their health. Materials & Procedures: In December 2016, 13 questionnaires on a 4-point scale were given to 115 high school students in Chennai who used smart phones. The findings were tallied, assessed, and backed up by data. Results: Women made up 74% of the participants., 45% had been using smart phones for more than three years, 77% had been using them daily for more than five years, 66% had a habit of checking their phones while they slept, 72% had been using them for academic purposes, 79% had headaches, 54% had eye pain, and Arm and neck pain affected 43% of people. The key finding of this study was that, given enough information of the health risks associated with smart phones, users should limit their use and take reasonable precautions to avoid having a detrimental impact on their health.[7]
The study's primary goals were to evaluate the characteristics and usage patterns of smart phones among college-bound students, according to prior studies. Using the snowball method, a sample of 60 college-bound kids, both males and girls, was chosen. A self-structured questionnaire was used in this study, and after the data were analyzed, frequencies and percentages were calculated. The most popular smart phone brand among college-bound kids was MI, followed by Samsung. Smart phones cost between 11,000 and 15,000 rupees for 46% of the students. The majority of students made independent decisions while buying their smart phones. The majority of students had smartphones with large batteries. Although 83% of the students possessed two SIM cards, most only used one for internet access. In both slots 1 and 2, Jio was the most popular SIM. 73.33% of students spend more than 300 rupees to recharge their SIM for three months. Of the students, 68.33% had a 1.5 GB daily data plan. Maximum pupils used their smart phones for 4-6 hours every day, up from 1-2 hours during breaks. Due to their smart phones, more than half of students occasionally lose track of time and neglect their assignments. 60% of students claimed that using smart phones while studying has a negative effect. The majority of students claimed that a smart phone is necessary and that push-button phones are uncomfortable for them[8].
In order to assess the effects of this extended quarantine on undergraduates' levels of smart phone addiction, a cross-sectional study was developed. 6,157 undergraduate students from a random sample (mean age 19.79 1.67 years; males 28.7%) responded to the online survey. The survey is broken up into categories to collect information on socio-demographics, socioeconomics, academics, information regarding quarantines, and use of smart phones. The smart phone addiction scale-short version was used during the quarantine to determine the degree of addiction. Participants had a 62.4% prevalence of addiction (63.5% of men and 61.9% of women), with a mean score of 35.66 12.08 across the board). Most participants (85%) said that their use of smart phones increased or increased noticeably while they were in quarantine (27.6 and 57.2%, respectively), with over 42% using them for more than 6 hours per day. However, 75% of the youngsters desired to reduce their smart phone usage. The gender of the students,

the field of study, the parental education, household income, and other factors all showed statistically significant associations with smart phone addiction during the quarantine, in addition to the location of the quarantine (urban, rural), and the characteristics of the house (apartment, independent house, with/without a garden). Students who were female, majoring in science or medicine as opposed to majoring in humanities, had better earnings, had been isolated in apartments without gardens, and were in cities had much higher addiction ratings.[9]

CONCLUSIONS
This study found that people's social behaviour is impacted by their use of smart phones. Smart phones can be smart if society, technologists, and those involved in high school education, such as faculty, students, and education providers, recognize their responsibilities toward using these gadgets responsibly in order to gain greater benefits in education, health, and social life. This study examined how smart phones are influencing society, including both positive and bad effects on social impact, addiction, and health. It is important to warn smart phone users about the negative consequences addiction and their health.

DATA AVAILABILITY
The corresponding author may give the data analyzed and utilized in this study upon request.

ETHICAL CLEARANCE AND PERMISSION FROM RESPONDENT
Each participant verbally agreed to be published and provided the information needed to do so.

COMPETING INTERESTS
There is no conflict of interest related to the publishing of this research report.

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