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Pattern of Internet Use and Knowledge and Practices in School Children

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Abstract
Study background
AACCI - Association of Adolescent and Child Care in India conducts multicentric youth behaviour studies in India. The results are shared with the school and intervention programs are held. This paper analyses the pattern of internet use knowledge and practices in school children

Abbreviations
AACCI - _Association of Adolescent and Child Care in India

Methods
Cross sectional study. All children studying in class 6th to 10th (n=377) age range 11-16 yrs. -coed, elite, english medium school in North Delhi. Due permissions from parents and assent from participants taken. Ethical clearance was given by AACCI ethics committee

Results
n= 377 – Boys 66% (249) , girls 34% (128) . Majority i.e. 86.20% (325)) used internet and 29.2% (95) used for more than two hours a day. The favourite activities in 37.23% (121) were Internet games. 80% (259) had personal facebook account ;63.32% (164) have more than 100 facebook friends. Safety precautions analysis showed -a) majority i.e. 95% (246) believed that it is not right to post embarrassing personal information about self or friends. b) 21% (62) had facebook friends- not met in real life. c) Only 81% (239) students discuss internet experience with their parents; d) 47% (122) were not aware that information uploaded by them is tracked and stored and can be used by companies to make profits. e) Only 69% (203) used privacy settings and had detailed knowledge about cyber bullying.

Conclusions
Majority are not taking basic precautions like using privacy settings on the facebook. Since 34% (100) do not inform parents about their online activities, they are vulnerable to exploitation on the net and can also be tempted to go on inappropriate sites. We conducted a workshop in this school for students, parents and teachers on cyber safety and monitoring teen internet use. This is the need of the hour

Key words: Internet Use, School Children, Adolescents, Face Book Activity, Parental Monitoring, Cybersafety, Interventions

1. Introduction
Born in the digital world, for today's children using the internet is a way of life. World over ,the number of children having access to the internet is dramatically increasing.Globally, 25 per cent of rural children and young people aged 25 years or less have internet access compared to 41 per cent of their urban peers[1].

Children are fascinated by electronic gadgets and being exposed to it at a very young age can lead to risky online behavior unless educated in cyber safety and monitored by parents. They spend a lot of time on virtual interaction rather than establishing real life human relationships and physical activities.

India is one of the largest internet users(900 million) and 54% people had mobiles or smartphones in 2020 [2,3]. This is estimated to be 96% in 2040. 97% are regular users and 79% use daily in 2010 [4]. According to ICUBE (International Consortium of Universities for the Study of Biodiversity and the Environment) 2020 data, 323 million of urban Indian population and 299 million rural population use internet. 90% of these internet users, use it for entertainment and communication. [5]. Mathew P and Raman K studied the prevalence of problematic internet use (PIU) and pattern of internet usage in 900 students, aged 13-17 years of 2 schools in North and South India. The prevalence of PIU was found to be 1.16% among adolescents in North India and 4.40% among adolescents from South India [6].

Internet was originally developed for getting information and is definitely a valuable tool. But this tool can lead to pathological use and addictions, especially in children, unless care is taken by the adults in their life – be it parents at home or teacher in school. Internet addiction is the emerging problem because of excessive social networking like facebook and twitter. It can also be in the form of gaming, inappropriate surfing of sites like pornography. 56 % of 11-16year olds have seen explicit material online [7]. Digital parenting is the need of the hour. Parents at home and teachers in school - need to be educated about monitoring their child's internet use so that they can teach children how to use the internet safely and prevent being victimized by cyberbullying or indulge in risky online behaviour that can lead to conflict with the law. 60% of parents with children aged 14 to 18 reported them being bullied in 2019 [8]. Interestingly, internet addiction bears many similarities to other compulsive consumer behaviors, and its study as a type of non-rational consumption behavior could be an interesting issue in consumer studies. 'Dual' users access the internet on their mobiles habitually – 2 out of 3 access 'daily' and 1 in 3 uses it for more than an hour daily. Daniel P, in 2019 studied the pattern of internet use and the prevalence of internet addiction among interns at a medical college in Kerala. All interns were using smartphones and 96.3% of them used the internet daily. Duration of use of the internet exceeded three hours a day among 40% of them during weekdays and 60% on weekends [9].

Raveendran R et al did a study on 227 medical students, 17-24 years, in Kerala 2021 to see internet usage patterns and the prevalence of addiction. The prevalence of internet addiction was 59%. This study revealed that 196 (86.3%) students were using the internet for educational purposes, 135 (59.5%) for entertainment and 189 (83.2%) for socialising [10]. Daniel P,

in 2019 studied the pattern of internet use and the prevalence of internet addiction among interns at a medical college in Kerala All interns were using smartphones for communication, social networking, education, file sharing, web browsing and listening to music or news [9].

2. Material and Methods
2.1 Objectives
AACCI does multicentric studies on youth behavior which helps to get research data that is shared with the school management and parents to create awareness and plan effective intervention programs in the schools to teach safe use of internet

Study design – A School based cross-sectional study

Sample selection – convenience sample -all 377 students from the classes 6th to 10th allotted for this study by the school principal of a private co-ed english medium school in New Delhi

Inclusion and exclusion criteria – all students from the classes allotted – there were no exclusion criteria.

Study duration – data collections over a week in the month of July 2014

2.2 Permissions: was obtained from school authorities and parental permission through the principal. Written assent was included in the AACCI proforma.

2.3 Tool: Questionnaire to assess Internet activity developed by AACCI team. It has 28 Questions (Table 1)

Procedure – The 4th Author took a training session with the teachers to administer the AACCI questionnaire and they got the forms filled in each class after explaining the purpose of the study. No names were asked for, only age and class to maintain anonymity and get honest answers

3. Results
The sample consisted of all students studying in 6th to 10th std in this school. There were 377 students - 249 boys (66%) and128 girls (34%)

There were 75 students (20%) from the 6th std (11-12 years) ;85 students (22%) from 7th std (12-13 years.); 85 students (22%) from the 8th std (13-14 years.); 72 students (20%) from the 9th std (14-15 years) and 60 students (16%) from 10th std (15-16 years.)

Out of the total sample of n =377 only 325 children (86.20%) reported that they use the internet and answered the questions related to their internet use so the analysis has been done on n=325

Table 1 – AACCI Questionnaire n=325	
Sr. No.	Questions
1.	Do you spend time on internet?
2.	If yes, how many hours per day do you spend on the internet?
3.	What are your favorite activities on the internet?
4.	Are you on facebook?
5.	If yes, how many 'friends' do you have?
6.	You like being on facebook because?
7.	Do you have 'friends' on facebook who you have not met in real life?

8.	Do you find it more fun to spend time on facebook than to go out to play or meet friends?
9.	Is your parents on your 'friends' list on facebook?
10.	Do you discuss your internet/ facebook experiences with your parents?
11.	Do you discuss your internet/ facebook experiences with your older siblings or any adult in your family?
12.	Has anyone discussed with you about how to be 'safe' on internet?
13.	If yes, who?
14.	Do you use 'privacy settings' on facebook
15.	Do you give information about yourself such as name, address, phone number anywhere on the internet?
16.	Do you know what identity theft is?
17.	Do you know what cyberbullying is?
18.	Do you know anybody who has been bullied/harassed by negative, false information posted on the internet about him/her?
19.	Do you know anybody who has been bullied/harassed by indecent picture or information posted about him/her?
20.	What would you do if you found out that your friend was being cyber bullied?
21.	Has any stranger you met online tried to be friends with you?
22.	Do you know of anybody whose account has been hacked into?
23.	Have you hacked into anybody's account?
24.	Do you think it is alright to post embarrassing information about yourself or anybody else anywhere on the internet?
25.	Are you aware that college authorities and future employers check your online profiles before giving you admission or job?
26.	Are you aware that when planning for marriage alliances the prospective partner checks your online profile before making a final decision?
27.	Do you know that all your information and activities on the internet are tracked, and stored, and can be used by companies to make profit?
28.	Are you aware that once you post something on these social sites it leaves behind permanent foot prints and even if you delete it, it can be retrieved anytime by experts in this field?

Table 1: Questionnaire used

No. of Hours spent on the internet. n=325		
Time spent	**No. of students**	**Percentage**
<1 hr	230	70.8
2 hr	69	21.2
3 hr	16	4.9
>3 hr	10	3.1

Table 2: No. of hours spent on the internet

Favorite activities on internet n = 325	
Name of the activity	**Number (%)**
Browsing	100 (30.77%)
Chatting	24 (7.38%)
Social Networking	80 (24.62%)
Games	121 (37.23%)

Table 3: Favorite activities on internet

Pattern of facebook use n=325	
No of students having face book accounts 259 (80%)	
No. of facebook friends n =259	
No. of facebook friends	no/%
100	95 (36.68%)
100-200	61 (23.55%)
200-300	36 (13.90%)
>300	67 (25.87%)

Table 4: Pattern of facebook Use

Safety issues regarding Face Book Use n=295	Yes	No
Do they have friends on facebook who they haven't met in real life?	21% (62)	79% (233)
Do they have more fun on facebook than real friends?	16% (47)	84% (248)
Are their parents in facebook friends list	49% (144)	51% (151)
Do they discuss their facebook activities with parents?	66% (195)	34% (100)
Have they had discussions with anybody about safe internet use?	81% (239)	19% (56)
Do they use privacy setting in facebook?	69% (203)	31% (92)
Do they believe that it is not right to post any embarrassing information about yourself or your friend?	95% (246)	5% (13)
Are they aware that the information uploaded by them is tracked and stored and can be used by companies to make profits?	53% (137)	47% (122)

Table 5: Safety issues regarding facebook use

Knowledge about cyberbullying n=325	Yes	No
Have you got knowledge about cyber bullying?	204 (62.76%)	121 (37.24%)
Do you know of anybody who has experienced cyber bullying?	56 (17.23%)	148 (82.77%)

Table 6: Knowledge about cyberbullying

4. Discussion

Table 1 shows the 28 questions we made for this study which pertained to the pattern of their internet use and facebook use. In our study out of our total sample of 377 only 325 (86.20%) were using the internet. Our further analysis is on these 325 students. We also analyzed the pattern of use and safety precautions followed issues of their use (Tables 2,3,4 5 and 6) Table 2 shows hours spent on the internet. Out of 325 students, 230 students (70.8%) spent less than 1 hr; 69 students (21.2%) spent around 2 hrs, 16 students (4.9%) spent around 3 hrs and 10 students (3.1%) spent more than 3 hrs on internet. On comparing with other studies, in a study by Balhara et al, 2018 , New Delhi, out of 6291 student of grade 6-12., 48% of the students spent less than 1 hour online, 26% spent less than 2hours on internet. [11]. In a study on Italian children 9-18yrs 21% children spent more than 1 hour, 29% more than 2hours, 41% spent more than 3 hours daily on internet(Spina et al 2021) [12]. However Mexican data shows that school age Mexican children spent on an average 3.7 hours on internet, which increased as age increased [13].

Possible reasons for majority of children spending lesser hours on the internet in our study could be due to more parental monitoring of time spent on internet at home and that school does not allow use of smart phones in schools. According to ISTAT report 2019, 72% of Italian children accessed internet via smartphones [12].

Table 3, shows favourite activities on internet- a) 37.23% (121) games as their favourite activity. b) 30.77% (100) enjoyed just browsing. c) 24.62% (80) social networking d) 7.38% (24) for chatting.

On comparing with other studies 'Listening to music', 'cinema' and 'gaming' are their biggest hobbies according to moneymint [4]. In a similar study by Balhara et al, 50% students used internet for searching information,48% students went online for chatting with friends, 30% for playing games,23% for entertainment by downloading audio or video [11]. INEGI data of Mexican children also shows entertainment and seeking information for school activities the most frequent uses of internet use, which intensify as children get older [13]. However, ISTAT data 2019, Italy shows that the most common use of internet by adolescents was to communicate with friends and social media [14].
Alghamdi and Alghamdi in a study on 391 school students of Saudi Arabia, found that 15% of participants played games online with friends and 71% students spent more than 3 hours playing online games [15].

Table 4 In our sample 259 (80%) had facebook accounts. Analysis of the number of facebook friends showed a) 36.68% (95) had 100 friends b) 23.55% (61) had 100 to 200 c). 13.90% (36) had 200 to 300 d). 25.87% (67) had more than 300 friends.

Sharma R, Jhala J studied internet usage in 1657 students, 13-19 years from Vadodara (2017). Twitter, facebook and other social networking sites were among the most commonly used social networking sites [16]. Balhara et al showed that, there was a positive correlation between time spent on social media, online gaming, online chat rooms, recreational surfing, with problematic internet use (PIU). However, if the internet is used for education related activities, it negatively correlates with risk of PIU [11].

Table 5, shows safety precautions children in this sample take while using face book. Only 233 (79 %) students have facebook friends whom they have also met in real life. This means 62 (21%) are having risky online behaviour of interacting with unknown people. This is how children become victims of predators who can pose as children and groom the victims. Only 47(16%) reported that they have more fun on facebook rather than with real friends. This is good as they are still connected more to real life friends than relating to only virtual friendships .151 students (51%) reported that don't have their parents on their friends list. 195 students (66%) told that they discuss the activities which they have done on facebook with their parents. . This shows that more parental involvement and monitoring of facebook activities is required as these are not adults but minors being school children and are more likely to be victims of risky online behaviour.

Regarding safety issues - only 239 students (81%) reported that they have talked with someone about how to use internet safely. Only 203 students (69%) reported that they use privacy setting. It was good to note that 246 students (95%) believed that it is not right to post any embarrassing information about yourself or your friends. 137 students (53%) reported that they were aware that the information uploaded by them is tracked and stored and can be used by companies to make profits.

Alghamdi and Alghamdi in a study [15] reported that 8% had friends that they only knew through online gaming and had not met in person which is lower than our results of 21%.

Table 6, shows the knowledge about cyberbullying in our sample. 62.76% (204) reported that they have knowledge about cyberbullying. And when asked about do you know anyone who has experienced cyber bullying then 82.77 % (148) reported that they had not.

Our study shows that though majority of children now are using social media, many are still unaware about the dangers of posting personal information and making friends with strangers. Unless made aware about responsible and safe internet usage and various aspects of cyberbullying, school children are very vulnerable to risky online behaviour [17,18,19].

Unsupervised use of internet in school children can lead to increased risk of internet addiction. Association of Adolescent and Child Care in India (AACCI) undertook a multi-centric study for youth behaviour in adolescents. A cross-sectional survey was done using the Kimberley Internet Addiction Test [20] to assess Internet addiction (IA) levels in school children. In this sample we had total of 796 students age range of 13-17 years from three middle-socio-economic schools in North India [(Delhi (n=320), Haryana (n=277) and Uttarakhand (Tibetan school, n=199)] Results showed that 40% had mild and 23% had moderate levels of addiction [21]. Males showed statistically significant higher addiction levels [Delhi: t =12.61, p <0.05; Uttarakhand: t = 9.875, p <0.001 and Haryana: t = 9.465, p< 0.01]. One-Way ANOVA results suggested no statistically significant difference in addiction levels across the age levels (early (10-13 years), middle (14-16 years) and late (17-18 years) adolescents). However, the frequency of Internet Addiction showed a steady increase as students move from early to mid and late adolescence underlining the importance of early intervention. Access by Net Card was also seen to have a statistically significant impact on increased levels of addiction in the states of Uttarakhand and Haryana. Comparison of schools showed that the students in the hilly areas of Uttarakhand had higher moderate levels of addiction compared to semi urban Haryana; whereas in the metro city of Delhi students showed higher levels of mild addiction.These findings indicate an urgent need for intervention in these two areas. Results also highlight the need for building awareness on healthy practices for internet use, to reduce addiction levels.

5. Conclusions
• Students in this sample do not have enough basic information about cyber safety and correct internet use

• Most students in this sample use the internet for recreation (social networking and games) and not for getting information and hence wasting a lot of valuable study time. This also can be a risk of Internet gaming addiction

• Majority of the children who use face book are not following safety precautions and this risky online behavior can lead to adverse consequences of cyber bullying or sexual exploitation

• 34% do not inform parents about their online activities. This again shows their vulnerability for online risky behavior

• The need of the hour is to create awareness among students about the risks and consequences of unsafe internet use and vulnerability of addiction to gaming etc

• There should be regular sessions in schools and colleges for not just students but also parents and teachers so that they can also help and monitor them .

• AACCI regularly conducts such sessions on cybersafety in schools and colleges for students as well as parents and teachers where they are made aware of safe internet use, exploitation and risks of internet use and prevention of addiction /problematic internet use. We did a session in this school also .

• More studies with higher sample size are needed to study about internet behaviours of children and factors affecting them. This can help to formulate policies and prepare material to educate them.

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