Relationship Between Involvement in Cyberworld and Mental Health of Adolescent Students in Kerala

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Abstract

Cyber world is the virtual world that comprises computer, mobile phones and services like internet. Social media is a part of cyber media. Social media allows teens to share their knowledge about various aspects of life and culture, which make them feel valued and important. In addition to the impact on young people's wellbeing and life satisfaction, there also appears to be a link with mental health problems. Evidence of a substantial rise in mental health problems in young people has increased interest in the links between social media and mental health. Adolescents' increased use of technology has been accompanied by a decrease in the amount they sleep and an increase in behaviour problems and attention difficulties and poorer academic achievement. Time spent on online has also been associated with a decline in academic achievement and participation in offline social interaction. There is limited research on effective interventions to address this online risk among adolescents. Hence the present study intends to find out the relationship between involvement in cyber world and mental health of adolescent students in Kerala. A sample of 2338 students from 21 higher secondary schools of 9 districts of Kerala State was selected for the conduct of the study. An 'internet usage scale' prepared and validated by SCERT and a cyber world awareness test were used for the study. To analyse mental health of students, Strength and difficulty questionnaire was administered. Uni- variate and Bi- variate analysis are conducted. When analysing the extent of involvement in cyber world by adolescent students, it is found that a great majority of adolescent students use cyber world.

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Students preferred to use cyber world mostly for entertainments followed by academic purpose. Majority of students using cyber world have good awareness on the ill effects of using it and they are having good practices related to the use of cyber world. At the same time, a meagre percentage of students use to visit abusive sites, secretly record pictures and keep porn messages. A great majority of students know the existence of cyber cell in every district in Kerala and it is offensive to use the personal information of others without their permission. Majority of the students are aware about cyber bullying and phishing, around half of students are aware of spoofing and online grooming. In this study the variable extent of involvement in cyber world has three dimensions such as overall usage of cyber world, practice internet use and awareness of adolescent students on cyber world. The variable mental health of adolescents has two dimensions such as overall difficulty and impact supplement. From the analysis it is found that considerable percentage of students belongs to abnormal and borderline in emotional symptoms, conduct problems, hyperactivity, peer problems, and pro- social behaviour. There is negative relationship between awareness on cyber world and impact supplement for all the subsamples indicating that awareness on cyber world tends to decrease the impact supplement. A weak relationship is found between involvement in cyber world and mental health of adolescent students which indicates that involvement of cyber world is not a disturbing factor for mental health. The information obtained from this study can be helpful in managing stress and anxiety, peer pressure and behavioural problems among adolescent students. Comprehensive health education including mental health through psychosocial competence in adolescents is one of the primary goals to be achieved.

Introduction

Cyber world is the virtual world that comprises computer, mobile phones and services like internet. A person who is a member of the cyber world can be designated as a cyber citizen. Social media is a part of cyber

media. Social media has been defined as " forms of electronic communication (such as websites for social networking and micro blogging) through which users create online communities to share information, ideas, personal messages, and other content (such as video)." High profile social networking sites include Facebook, Twitter and Instagram given the emerging popularity of instant messaging services, such as WhatsApp, Facebook Messenger and Snapchat. Since the birth of social media in the new millennium, significant concerns have been raised about its impact on young people's wellbeing. Social media has become a powerful medium to communicate and navigate in social circles. It also provides an excellent platform for news sharing, creativity display, and learning. Social media allows teens to share their knowledge about various aspects of life and culture, which make them feel valued and important. Social media acts as an imported support system for teens from the marginalized community like lesbian, gay, transgender, with chronic illness, and physical or mental disability. It is seen that online risks such as addiction, cyber bullying, and sexual solicitation are associated with negative consequences for youth (Broadhurst et .al 2014). Spending time in social media Network sites is the most common activity among the current generation of children and youngsters. Gaming sites, simulated worlds and video sites such as YouTube; and blogs offer youth a gateway for entertainment and interaction(O'Keeffe & Clarke, 2011). In addition to the impact on young people's wellbeing and life satisfaction, there also appears to be a link with mental health problems. Evidence of a substantial rise in mental health problems in young people has increased interest in the links between social media and mental health. Mental health is a positive concept related to the individual's social, emotional, and psychological well being.Mental health is now recognized as an important aspect of an individual's total development and mental hygiene is accepted as an integral part of the school programme. The design and usage pattern of social networking is such that it needs the sharing of personal information and disclosure of details. The growth of technology has changed the world, which in turn has changed the daily lives of children and adolescents who use the

internet, mobile phones, television, and computer video games on a daily basis. Adolescents' increased use of technology has been accompanied by a decrease in the amount they sleep and an increase in behaviour problems and attention difficulties and poorer academic achievement. Time spent on online has also been associated with a decline in academic achievement and participation in offline social interaction. The evidence suggests that each additional hour of viewing internet increases the likelihood of experiencing socio- emotional problems. MusarratAzher, et al. (2014) studied the prevalence of internet addiction and the relationship between internet addiction and anxiety level of students in the University of Sargodha with 300 samples by using Young's internet addiction scale, the result shows that prevalence level of internet addiction is more in male students than female students. It also indicated that there is a positive relationship between internet addiction and anxiety level of the students. There is limited research on effective interventions to address this online risk among adolescents. Hence the present study intends to find out the relationship between involvement in cyber world and mental health of adolescent students in Kerala.The study is conducted among adolescent students at   higher secondary level.

Objectives of the Study

1.   To find out the extent of involvement in cyber world by adolescent students.

2.   To find out the pattern of involvement in cyber world by adolescent students.

3.   To assess the level of mental health of adolescent students.

4.   To find out the relationship between the extent of involvement in cyber world and mental health of adolescents

Tools used

A sample of 2338 students from 21 higher secondary schools of 9 districts of Kerala State was selected for the conduct of the study. An'internet usage scale' prepared and validated by SCERT and a cyber world awareness

test were used for the study. To analyse mental health of students, Strength and difficulty questionnaire was administered. Uni- variate and Bi variate analysis are conducted. Chi-square test, 't' test and F test are also used to analyse and interpret the data.Sample selected for the study are from the districts of Thiruvananthapuram, Kollam, Alappuzha, Kottayam, Idukki, Wayanad, Malappuram, Kannur and Ernakulam giving due representation to Class, Management, Locale, Gender, and Stream of subjects.
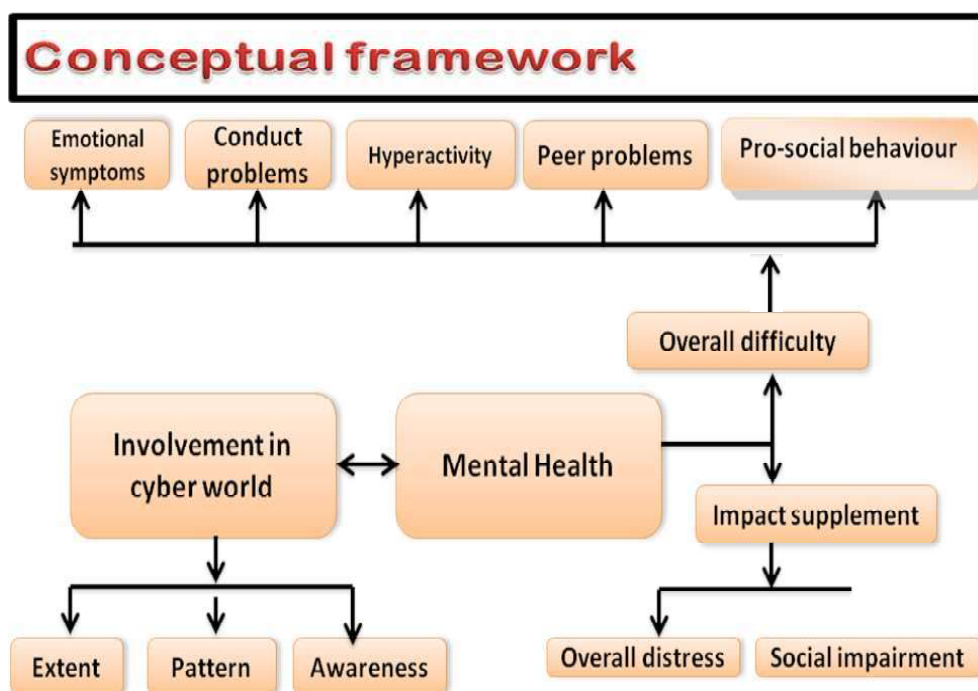

Fig 1

Analysis

Table 1 Sample according to Usage of various areas of cyber world

Use of different areas of cyber world	Count	Percent
WhatsApp	1514	64.8
Messenger	427	18.3
Instagram	402	17.2
Face book	967	41.4

Twitter	40	1.7
LinkedIn	2	0.1
Game	1059	45.3
Movies	1671	71.5
E-mail	346	14.8
Wikipedia	293	12.5
YouTube	1375	58.8
Others	326	13.9

It is found from Table 1 that majority of the adolescent students are using cyber world for watching movies (71.5%). Comparatively higher percentage of students are also using WhatsApp and You tube.

Table 2 Extent of duration of usage of cyber world by adolescents (in hrs.)

Usage of cyber world	Weekdays		Weekends		Overall	
	Mean	SD	Mean	SD	Mean	SD
WhatsApp	1.23	1.80	1.40	2.13	2.63	3.44
Messenger	0.89	1.66-	0.99	1.58	1.88	2.90
Instagram	1.25	1.69	1.25	1.87	2.50	3.23
Face book	0.91	1.34	1.12	1.52	2.03	2.53
Twitter	0.69	0.86	0.98	1.10	1.68	1.82
LinkedIn	0.50	0.71	1.75	0.35	2.25	1.06
Game	1.30	1.84	1.69	1.77	2.99	3.09
Movies	1.62	2.10	2.56	1.81	4.18	3.14
E-mail	0.48	1.05	0.36	0.93	0.84	1.87
Wikipedia	0.44	0.53	0.42	0.82	0.86	1.06
YouTube	1.08	1.87	1.33	1.80	2.41	3.34
Others	0.88	1.21	1.11	1.76	2.00	2.68

The extent of usage of different areas of cyber world is higher for watching movies (4.18 hrs). It can be observed that overall usage by students is higher for WhatsApp (2.63 hrs), Instagram(2.56hrs) Face book (2.03) LinkedIn(2.25), You Tube(2.41), and for playing games (2.99). The overall usage of cyber world differ significantly among rural and urban students as well as among boys and girls (Table 3).

Table 3 Association of overall usage of cyber world with selected socio- personal variables

Variables / categories		Mean	SD	N	't"	Level of significance
Class	XI	10.4	12.6	1655	0.13	p>0.05
	XII	10.5	11.8	548		
Management	Govt.	10.3	11.2	965	0.43	p>0.05
	Aided	10.5	13.3	1238		
Locale	Urban	9.4	11.5	1024	3.65	p<0.01
	Rural	11.3	13.1	1179		
Gender	Male	13.8	15.4	1013	12.46	p<0.01
	Female	7.5	8.0	1190		

Table 4 Views/ opinions of adolescents regarding different practice of internet use

Practice of internet use by adolescents	Count	Percent
I use internet in common place at home.	1941	88.1
Use of internet does not adversely affect my studies.	1497	68.0
Interactions of others does not affect my use of internet	1365	62.0
I used to inform elders when I get messages from strangers.	1687	76.6
I don't communicate with fake address.	1494	67.8
I am conscious about the ill aspects of cyber media.	2022	91.8
I don't record visuals at risky environment.	1330	60.4
I used to keep porn messages or pictures.	76	3.4

I used to visit abusive sites.	107	4.9
I used to establish friendship with strangers through social media.	352	16.0
I used to share defaming news with others.	288	13.1
I used to forward information to others without checking their authenticity	443	20.1
I used to share the pictures of others which I have recorded secretly.	102	4.6
I feel angry when my parents restrict me in using internet.	507	23.0
Mobile/smart phone can be used while crossing road.	79	3.6

Great majority of adolescents (91.8%) reported that they are conscious about the ill aspects of cyber media while 88.1% of students use internet at common place. It is followed by the response that they inform elders when get message from strangers (76.6%) (Table 4). Majority of students using cyber world have good awareness on the ill effects of using it and they are having good practices related to the use of cyber world. At the same time, a meagre percentage of students use to visit abusive sites, secretly record pictures and keep porn messages.

Table 5 Association of overall practice of internet with different subsamples

Subsamples		Poor		Moderate		Good		x^2	Level of signifi-cance
		Count	Percent	Count	Percent	Count	Percent		
Class	XI	32	1.9	542	32.7	1081	65.3	19.81	p<0.01
	XII	30	5.5	161	29.4	357	65.1		
Management	Govt.	34	3.5	351	36.4	580	60.1	20.82	p<0.01
	Aided	28	2.3	352	28.4	858	69.3		
Locale	Urban	34	3.3	325	31.7	665	64.9	1.79	0.408
	Rural	28	2.4	378	32.1	773	65.6		
Gender	Male	50	4.9	363	35.8	600	59.2	49.53	p<0.01
	Female	12	1.0	340	28.6	838	70.4		

	Science	43	3.8	346	30.8	736	65.4		
Subject	Commerce	7	1.0	236	34.1	449	64.9	13.75	p<0.01
	Humanities	12	3.1	121	31.3	253	65.5		

Table 5 shows that there is no significant difference in the overall practice of internet among rural and urban students, but there exists significant difference in the practice of cyber world among XI and XII [th] standard students, govt and aided school students, boys and girls and students belonging to various streams of subject such as Science, Commerce, Humanities.

Table 6 Awareness of adolescent students on different aspects ofcyber world

Awareness of adolescent students on cyber world	Count	Percent
All districts in Kerala have cyber cell.	2024	86.6
Online grooming is approaching young people for the purpose of sexual exploitation	974	41.7
Spoofing is a disguising of communication with false IP address or place using technology.	1457	62.3
It is offensive to use the personal information of others without their permission for any transaction through electronic media	2088	89.3
Phishing is a fraudulent attempt to collect username, password and account number by disguising as a trustworthy website	1653	70.7
Cyber bullying is spreading rumours, taking revenge hacking accounts and stealing personal information through messages or social media	1848	79.0

A great majority (86.6%) of students know the existence of cyber cell in every district in Kerala and it is offensive to use the personal information of

others without their permission (89.3%). Majority of the students are aware about cyber bullying and Phishing., around half of students are aware of spoofing and online grooming (Table 6).

Association of awareness of adolescent on cyber world with selected variables

Table 7 Association of awareness of adolescent students on cyber world with selected variables

Subsamples		Poor		Moderate		Good		x^2	Level of signifi-cance
		Count	Percent	Count	Percent	Count	Percent		
Class	XI	260	14.8	637	36.3	856	48.8	11.55	P<0.01
	XII	75	12.8	177	30.3	333	56.9		
Management	Govt.	147	14.6	434	43.0	429	42.5	58.58	p<0.01
	Aided	188	14.2	380	28.6	760	57.2		
Locale	Urban	116	10.9	452	42.4	499	46.8	54.92	p<0.01
	Rural	219	17.2	362	28.5	690	54.3		
Gender	Male	215	20.1	368	34.3	489	45.6	56.15	p<0.01
	Female	120	9.5	446	35.2	700	55.3		
Subject	Science	155	13.1	441	37.2	588	49.7	8.8	P<0.01
	Commerce	107	14.7	233	32.1	386	53.2		
	Humanities	73	17.1	140	32.7	215	50.2		

It is found that Class of the students, type of management, locale, gender and stream of subjects are associated with the awareness of students on cyber world. Students belonging to XII, aided school, rural schools, females and students of Humanities have higher awareness on cyber world compared to their counter parts (Table 7).

Mental health among adolescents

The Strengths and Difficulties Questionnaire (SDQ) is a brief screen for child psychiatric disorders designed for children aged 4-17, with subscales

measuring emotional problems, conduct problems, hyperactivity, peer problems, and pro-social behaviour. The total difficulty score is a measure of overall child mental health problems that has been shown to have good psychometric properties in studies from around the world. The 20 items which covering emotional symptoms, conduct problems, hyperactivity and peer problems, can be summed to give a 'total difficulty score'. There is also an Impact Supplement that measures distress and impairment due to emotional and behavioural problems. The SDQ impact supplement asks whether reported difficulties cause the mental distress among adolescents.

Although SDQ scores can often be used as continuous variables, it is sometimes convenient to classify scores as normal, borderline and abnormal.The variable mental health of adolescents has two dimensions:- overall difficulty and impact supplement.
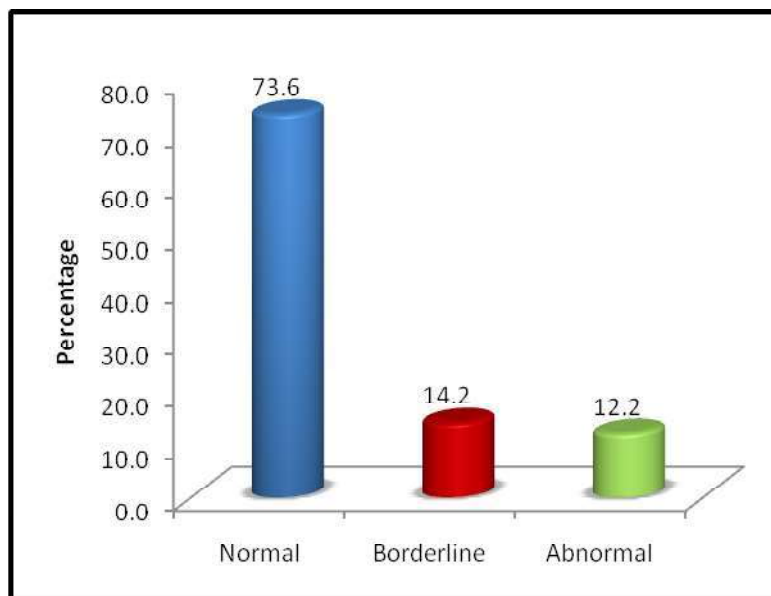

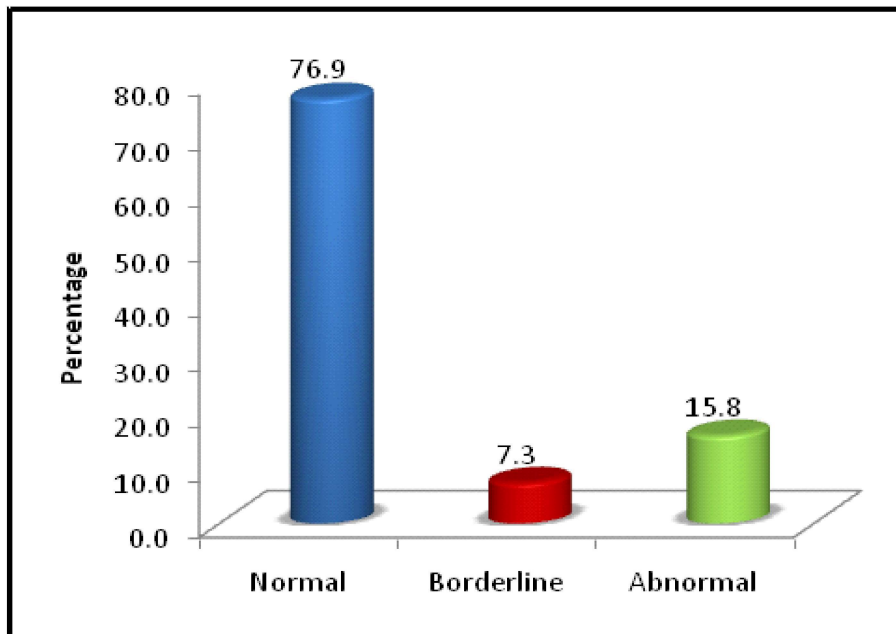Fig 2 Percentage distribution of the sample according to overall difficulty

Fig 3 Percentage distribution of the sample according to impact supplement

From figure 2,it is seen that a considerable percentage of students belong to border level and abnormal(12.2%) in overall difficulty and a considerable percentage of students belong to border level and abnormal (15.8%) in impact supplement (fig 3).

Correlation between the extent of involvement in cyber world and mental health

There is low positive relationship between the Overall usage of cyber world and overall difficulty., practice of internet use and overall difficulty. There is low negative relationship between awareness on cyber world and overall difficulty.There is low positive relationship between extent of involvement (Overall usage of cyber world, Practice of internet use and awareness on cyber world) in cyber world and impact supplement

Conclusions and Suggestions

The information provided by teachers and parents shows that the use of cyber world among students irrespective gender, class, place and school

management is higher. It is vivid that involvement in cyber world has the crucial role in adolescents' day to day activities. Awareness on cyber world is very important since it is an associated factor for explaining mental health among adolescents. The information obtained from this study can be helpful in managing stress and anxiety, peer pressure and behavioural problems among adolescent students. Comprehensive health education including mental health through psychosocial competence in adolescents is one of the primary goals to be achieved. Involvement of adolescents in cyber world is not a threatening factor for their mental health to a large extent, it can be suggested that providing cyber education from the student's perspective which intends to keep the students safe in their digital world is necessary.

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