

A Study on Depression Associated With Internet Use and Victimization among School Going Adolescents

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Abstract

Introduction: With the extensive usage of internet among adolescents for social media, education & peer pressure game play, internet victimization leading to depressive mental health has become a problem in our society. As proposed by the Stress Generation Model, stress induced by victimization builds & multiplies on itself and effects juvenile lives leading to depression.

Materials and Methods: Four hundred school students of classes' 9th & 12th standards between 13 to 18 years of age were randomly selected & chosen to be evaluated for internet abuse & depressive symptoms in the last 9 months from 4 schools in Hyderabad. Those who showed depressive symptoms the Patient Depression Questionnaire (PHQ9) is a self-administered format for common mental disorders was also administered to assess the severity of depression.

Observations: Of the four hundred adolescents, 374 used the internet. Among the internet users 168 of these children reported victimization. Of those bullied 98 (58%) were boys & 70 (42%) girls. Upon administration of the PH9 questionnaire 112(66.6%) suffered from depression. Minimal depression was observed in 81 (72.3%), 17(15.1%) mild and 14 (12.5%) moderate. Moderately severe and severe depression was not observed. Minimal depression was observed in 2(7.6%) among the non-internet users. ($P < 0.001$)

Conclusions: Adolescents exposed to high internet usage are exposed to abuse & bullying leading to depression than compared to those of non-users. The depression is predominately minimal but could cascade into severe forms if appropriate interventions are not adapted.

Keywords: Depression; Stress; Internet; Drug abuse

Introduction

The rapid rise in internet usage among adolescents for education & social media communications has raised concerns about the mental consequences in this easily influenced age group. The internet surfing provides a platform for formation of friendships of unknown quality as opposed to off line friendship. The online friendships are viewed as superficial and weak as they usually lack commitment & affection. Increased exposure to online friendship has shown to reduce exiting friendship affecting their stable mental health [1]. Within our society internet induced victimization and leading to depression has become a social mental health problem affecting these juveniles who are easily influenced.

As shown in the Stress Generation Model for depression, children with incrementally hike their levels of depression on a persistent victimization pathway [2]. Past research has demonstrated that that cyber bullied adolescents show a greater degree of depression [3].

Both Online and Offline victimization are independently associated with delinquent behaviour, depression & drug abuse [4]. Children who use internet extensively are not just increasing their duration of wastage of time but are prone to have increased anxiety and depression. Access and usage of internet has become an essential necessity for educational & communication needs. Reduction of face-to-face interactions leads to lack of development of communication skills. By 2019 November 31% of the internet users were children between 12-19 years & 38% of school going kids have access to Internet [5]. These figures will rise exponentially with the pandemic induced role of internet usage. With

this information, we explored the effect of internet victimization & its effect on mental health mainly depression in school going adolescents.

Methods and materials

Initial investigator child confidence & faithful relationship was established based on secrecy and after effects. Parental written permission was taken. Pediatrician, Pediatric clinical psychologist and one investigator assessed the mental health status of the child. A pretested self-reporting questionnaire (Table 1) was initially given as a cross section survey to assess as the presence of abuse regarding online violence & abuse in the last 9 months. 400 children aged between 13 to 18 years of 3 private & 1 government schools in Hyderabad were evaluated based on their responses. Those who reported online abuse were further evaluated for presence (more than 4 positive responses) and degree of depression using the PH-9 Patient Depression Questionnaire [6] (Figure 1). The responses were assed and scored

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Table 1: Self Reporting Questionnaire.

Are you using internet	Yes/no
How often do you use internet	Daily/every 2-3 days/weekly
Email use	Yes/no
Facebook use	Yes/no
Twitter account	Yes /no
Use of WhatsApp	Yes/no
Have you experienced abuse in the last 6 months	Yes/no
How often were you abused in the last 6 months	Daily /every 2-3 days/weekly
Abuse as bad comments	Yes /no
Was bad language used against you	Yes/no
Were you abused by showing pictures	Yes /no
Were you threatened	Yes/no
Was there an attempt to bad name you	Yes/no
Was there an attempt of defame your love affair	Yes/no
Was an attempt to take revenge on you	Yes/no

age distribution of the internet users was 13-15 years 167 (44.6%) and 16-18 years 207(55.3%). The sex distribution was Male: Female 200:174 (53.4%:46.6%). The rate of internet usage was daily 286(76.4%), every 2-3 days 76(20.3) & weekly 12(3.2%). 168 of the 374 (44.9%) assessed were observed to have been victimized in the last 6 months. Boys were more predominantly abused (98-58%) as compared to girls (70-42%). The age distribution of the victims has been shown in Table 2.

Analysis of the questionnaire the PHQ9 score was analysed and it was observed that 112 (66.6%) had some level of depression. In the population under study the various grades of depression have been shown in Table 3.

Minimal depression was observed among the nonusers of internet 2(7.6%) (p<0.0001). The cause of depression was not evaluated in this group. Data from the Self-reported questionnaire was analysed for specific responses to understand the cause of depression and these have been shown in Tables 4 and 5.

Table 2: Age Distribution of Victims.

Age	Number(percentage)
13-15 years	34(30.4%)
16-18 years	78(69.6%)

Table 3: Grades of Depression.

Grade of Depression	Number (Percentage)
Minimal	81(72.3%)
Mild	17(15.1%)
Moderate	14 (12.5%)
Moderately severe	0
Severe	0

Table 4: Internet Usage & Victimization In Relation to Age.

Internet usage	Age group 13-15 years	Age group 16-18 years
Email usage	48 (28.7%)	167 (80.6%)
Usage of Facebook	109 (65.2%)	184(88.8%)
Usage of Twitter	64(38.3%)	98(47.3%)
Use of WhatsApp	151(90.4)	201(98.5%)
Victimization		
Bad Comments	94(56.2%)	121(58.4%)
Abusive language	58(34.7%)	98(47.3%)
Pictorial abuse	27(16.1%)	45((21.7%)
Bad naming	81(48.5%)	101((48.7%)
Defame Love affairs	18(10.7%)	32(15.4%)
Taking revenge	73(43.7%)	94 (45.4%)

Table 5: Internet Usage & Victimization In Relation To Gender.

Internet usage	MALE	FEMALE
Email usage	136(68%)	124(71.2%)
Usage of Facebook	179(89.5%)	164(94.2%)
Usage of Twitter	78(39%)	89(51.1%)
Use of WhatsApp	192(96%)	171(98.2%)
Victimization		
Bad Comments	38(38.7%)	36(51.4%)
Abusive language	78(79.5%)	19(27.1%)
Pictorial abuse	27(27.5%)	21(30%)
Bad naming	31(31.6%)	37(52.8%)
Defame Love affairs	12(12.2%)	34(48.5%)
Taking revenge	32(32.6%)	30(42.8%)

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

ID #: _____ DATE: _____

Over the last 2 weeks, how often have you been bothered by any of the following problems? (use “✓” to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite —being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

add columns + +

(Healthcare professional: For interpretation of TOTAL, TOTAL: _____ please refer to accompanying scoring card).

10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?
 Not difficult at all _____
 Somewhat difficult _____
 Very difficult _____
 Extremely difficult _____

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Figure 1: Patient Depression Questionnaire.

as 0(never), 1(several days), 2 (3More than half the days), 3 nearly every day). A score was ascertained by totalling the response scores. Depression severity score total was interpreted as Minimal: 1-4, Mild: 5-9, Moderate: 10-14, moderately severe; 15-19 and Severe :> 15 [7].

Results

The internet usage was seen in 374 of the 400 children (93%). The

Discussion

Depression is a manifestation of varied psychological problems and the severity ranges depending upon the components involved, extraneous factors together with social & society interplay. Large number of school children between 13-18 years have had at least one episode of depression. In the present study 44.9 % children reported to have been victimized & of these 66.6% showed depressive symptoms which is similar to what has been observed in earlier research. There are consistent associations between cyber bullying and increased risk of depression. Depressed teenagers have also shown to easily be affected by cyber bullying [8]. Children between the age group 16 to 18 years are more exposed to the internet & being more labile to social pressures have a higher incidence of depression. Most the depressive episodes are minimal. Social media with images was associated with incidence of victimization & depression. There was gender equality seen in the usage of all types of internet media. Boys were seen to be more affected by verbal abuse & girls to personality abuse.

Persistent cyber bullying has shown to progress to psycho pathological disorders if left to chronicity [9]. Depressive children have been shown to develop cognitive defects, inferiority complexes, substance abusers & social misfits. [10]. Due to victimization by peers the bullied can develop negative social adaptive behaviours, negative inference, maladaptation leading to suicidal tendencies [11,12]. Changes in the internet usage on social media platforms and early identification is essential to alleviate the victimization of this fragile & nascent adolescent group. These measures will result in reduced incidence of depressive episodes.

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