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**A Comparative study on internet addiction among  
Government, private and CBSE school teachers at  
Pondicherry**

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## **Abstract**

### **Introduction:**

Internet addiction predicts overuse and pathological use among the individual. Mobile phone occupying day-to-day human life and children are considered as vulnerable group of mobile phone and internet addiction. During the amid lockdown of covid-19 predicts more usage of internet as well as mobile phone. Apart from children working people also distributing their internet addiction as well.

### **Methodology:**

The present comparative descriptive study was carried out from January 2021 to March 2021 among teachers who have resided at Pondicherry district. Initially we found 218 teachers from government, private as well as CBSE schools but 32 teachers refused to give consent and 36 teachers replied to not interest to participate in this study so that we got select 50 samples from each group. An online questionnaire contains (Kuppusamy Socio Demographic scale, Young Internet addiction scale, PHQ-9, HAM-A and Mental Health Checklist) in English language was used in this study.

### **Results:**

There will be positive relationship found from the Internet addiction and Mental health among all four factors. Regression analysis also found positively in the parameters of age, type of family and physical illness.

### **Conclusion:**

Due to this results this study suggested that we need to spread awareness of mobile phone addiction and internet addiction to everyone. This study predicts to do psychological management of internet and mobile addiction to needed.

## **Introduction:**

The extensive use of internet has spectacularly changed our lives in the 21<sup>st</sup> century. Although improvement of ICT in schools and colleges making them to learn via offline mode. Many of them in India like developing countries do not have awareness related to the internet addiction problematic internet use. Recently internet addiction also considered as an separated disorder in the field of psychiatry as per DSM-V (Cheng et.al, 2018 & APA , 2013). In a study (G Toth et.al, 2020) found various factors related to the internet addiction among teachers such as half of the population in their study spending more than 3 hours time in online a day and 42.5% people surfing community portals. Predicts that not only the children everybody using the internet and also like professionals spends lot of time among social media rather than natural communication. Statistics in India shows that almost 500 million users surfing the internet (Shaw M, 2008). During covid-19 lockdown made us with mobile phone, gadgets and laptops which results physical problem as well as mentally. There are number of teachers equipped themselves with the knowledge of using computers, laptops and gadgets.

Good wellbeing depends on the state of mind as well as body. Health education authorities characterize mental health as the emotion and spiritual resilience, which make possible to survive pain, disillusionment and sadness. WHO (2004) viewed that mental health is state of wellbeing which individual realizes his/her own abilities and can cope up with the normal stresses in day-to-day life can work productively, fruitfully and able to make contribution to his/her society. In a study Agarwal (1983) low correlation only found between participants stress proneness and their job satisfaction, Misra (1991) investigated the interrelationship between organizational conflict and psychological factors results found positively, Robin et.al (2000) their study revealed that increasing mental health knowledge results decreasing burnout. In a roul (2004) study found positive mental health results between autonomous and non-autonomous college teachers.

BJ Karen (2020) study investigated that anxiety related to online teaching among teachers results revealed when they practiced with the community people, virtual learning they overcome anxiety during pandemic. Predominantly assessing anxiety among online learning there was a measurement Foreign Language Classroom Anxiety Scale. Spaced out from the language learning students had anxiety to various subject and teachers had anxiety in particular subject on

teaching. During this pandemic schools had more burden regard maintain records of each student as well as quality in education, collecting the school fees, distributing the salaries to the workers, understand the problematic behavior in children etc.

Superfluous internet users also called as pathological internet users predominantly children using mobile phones to learn via screen with isolation at their home. Teachers being in the family routine they took classes through zoom, WebEx, Google meet and other platforms. Few teachers also found had excessive internet usage after their online classes. The aim of this research was to detect comparatively pathological usage of internet among school teachers along with that need to assess psychological effects in teachers. Medical conditions related questions also recorded.

#### **Inclusion Criteria:**

- ❖ Teachers between the age group of 30-60 years in any type of school at Pondicherry district
- ❖ Willing to participate in the study

#### **Exclusion Criteria:**

- ❖ Who have not experience in teaching with online classes

#### **Objectives:**

- To assess the personal and social factors among the teachers
- To associate Internet addiction, Psychological distress, Psychological health, Anxiety issues among teachers in the various schools.
- To correlate Internet addiction, Psychological distress, Psychological health, Anxiety issues among teachers in the various schools.

#### **Methodology:**

The present comparative descriptive study was carried out from January 2021 to March 2021 among teachers who have resided at Pondicherry district. Initially we found 218 teachers from government, private as well as CBSE schools but 32 teachers refused to give consent and 36 teachers replied to not interest to participate in this study so that we got select 50 samples from each group (Government, Private and CBSE). IEC approval was obtained from the institute. Keeping in view the critical situation and strict lockdown because of COVID-19, it was not possible to organize a community-based sampling survey; therefore, more preference was

given to the method of online data collection, through a questionnaire. This method helps us to prevent ourselves as well as participant's side without any physical or direct contact we conducted this study. An online questionnaire contains (Kuppusamy Socio Demographic scale, Young Internet addiction scale, PHQ-9, HAM-A and Mental Health Checklist) in English language after received permission from the authors we sent participants through Whatsapp to fill out. We have not used any translated version in this study. The access web link of the questionnaire along with a clear message comprising a brief introduction, including information about anonymity and confidentiality; objectives; a description of the procedure; and a statement concerning the voluntary nature of the survey was shared and posted/reposted on all easy-to-access and frequently used social-media applications like whatsapp.

### **Statistical Analysis:**

Data were evaluated as means  $\pm$  SD (standard deviation) by Student's t-test, the chi square test and the Pearson's rank-order correlation. Logistic regression analysis was used to determine the significance of the different parameters as independent risk factors of IA. The analysis was performed with appropriate adjustments for differences in risk factors and medication usage.

### **Measures:**

#### **Modified Kuppuswamy Scale:**

This is the mostly commonly used scale for determining the socio-demographic factors of an all the family. Kuppusamy scale was developed for urban-suburban-rural individual. It took three parameters into account namely, education, occupation and income of the individual.

#### **Internet addiction test:**

The internet addiction test also known as Young internet addiction scale previously used to lot of adolescents but in this study we used to adult people also teaching professionals to understand internet addiction through using android mobiles. IAT is a 20 items self reported scale. IAT has strong internal consistency ( $\alpha=0.90-0.93$ ) and has good test-retest reliability ( $r=0.85$ ) values (Samaha AA et.al, 2018).

### **Patient Health Questionnaire:**

Patient health questionnaire is a self-administered version of the Prime-MD diagnostic for common mental disorders. The PHQ-9 is the depression module which scores each of the 9 DSM IV criteria as “0” (Not at all) to “3” (Nearly every day). Scoring Criteria 1-4 results minimal depression, 5-9 Mild depression, 10-14 Moderate depression, 15-19 moderately severe depression and 20-27 results severe depression (Kroneke et.al).

### **Mental Health Checklist:**

Mental health checklist measures pre-illness and mental health conditions of the person. The split half reliability correlating the odd even items has been found to be 0.70 with an index of reliability 0.83. Mental health checklist consists 11 items and 6 mental and 5 somatic, presented in a 4-point rating format. Numerical value 1,2,3 and 4 assigned to the 4 response categories. The total score varies from 11 to 44, showing highest to the lowest mental health status of the person.

### **Hamilton Anxiety Rating Scale:**

The HAM-A (Maier et.al & Borkovec) was one of the first rating scales developed to measure the severity of anxiety symptoms, and is still widely used today in both clinical and research settings. The scale consists of 14 items, each defined by a series of symptoms, and measures both psychic anxiety and somatic anxiety. Although the HAM-A remains widely used as an outcome measure in clinical trials, it has been criticized for its sometimes poor ability to discriminate between anxiolytic and antidepressant effects, and somatic anxiety versus somatic side effects. The HAM-A does not provide any standardized probe questions. Despite this, the reported levels of interrater reliability for the scale appear to be acceptable. Each item is scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56.

**Figure 1: Comparison of socio-demographic variables between Government, Private and CBSE School teachers**

S.No	Factors	Government (N=50)	Private (N=50)	CBSE (N=50)	CS
1	Male	27 (18%)	12(8%)	24 (16)	0.006 (NS)
	Female	23(15.33%)	38(25.33%)	26 (17.33)	
2	30-45	21 (14%)	18 (12%)	26 (17.33%)	0.006 (NS)
	46-60	29 (19.33%)	32 (21.33%)	24 (16%)	
3	Urban	15 (10%)	16 (10.67%)	15 (10%)	0.035 (NS)
	Sub-Urban	15 (10%)	21 (14%)	28 (18.67%)	
	Rural	20 (13.33%)	13 (8.67%)	7 (4.67%)	
4	Primary School	4 (2.68%)	13 (8.67%)	1 (0.67%)	<b>0.001*</b> (S)
	High School	23 (15.33%)	14 (9.33%)	19 (12.67%)	
	Secondary School	18 (12%)	11 (7.33%)	15 (10%)	
	Intermediate	5 (3.33%)	12 (8%)	15 (10%)	
5	Nuclear	28 (18.67%)	11 (7.33%)	11 (7.33%)	<b>0.001*</b> (S)
	Joint	20 (13.33%)	32 (21.33%)	29 (19.33%)	
	Extended	2 (1.33%)	7 (4.67%)	10 (6.67%)	
6	Upper	7 (4.61%)	0	0	<b>0.000*</b> (S)
	Upper Middle	24 (16%)	0	27 (18%)	
	Lower Middle	17 (11.33%)	22 (14.61%)	20 (13.33%)	
	Upper Lower	2 (1.33%)	13 (8.61%)	3 (2%)	
	Lower	0	15 (10%)	0	
7	Diabetes Mellites	6 (4%)	6 (4%)	10 (6.67%)	0.151 (NS)
	Hypertension	8 (5.33%)	16 (10.67%)	18 (12%)	
	Other Illness	4 (2.67%)	2 (1.33%)	3 (2%)	
	None	32 (21.33%)	26 (17.33%)	19 (12.67%)	
8	First Dose	0	0	0	0.172 (NS)
	Second Dose	50 (33.33%)	50 (33.33%)	50 (33.33%)	
9	Facebook	2 (1.33%)	3 (2%)	3 (2%)	0.797 (NS)
	Twitter	0	2 (1.33%)	1 (0.67%)	
	Whatsapp	44 (29.33%)	39 (26%)	40 (26.67%)	
	Youtube	4 (2.67%)	6 (4%)	6 (4%)	

**P>0.05 = nil significant**

**Figure 2: Comparison of Factors Internet addiction, Patient Health, Hamilton Anxiety and Mental health status among Government, Private and CBSE School teachers**

S. No	Factors	Government (N=50)	Private (N=50)	CBSE (N=50)	CS
1	<b><u>INTERNET ADDICTION</u></b> NORMAL MILD MODERATE	45(30%) 5(3.33%) 0	29(19.33%) 21(14%) 0	16(10.67%) 29(19.33%) 5(3.33%)	<b>&lt;0.000*</b> (S)
2	<b><u>PHQ – 9</u></b> Minimal Depression Mild Depression Moderate Depression	33 (22%) 10 (6.67%) 7 (4.67%)	32(21.33%) 11(7.33%) 7(4.67%)	22(14.67%) 20(13.33%) 8(5.33%)	0.132 (NS)
3	<b><u>HAMILTON ANXIETY</u></b> Mild Severity Mild to Moderate	45(30%) 5(3.33%)	39(26%) 11(7.33%)	35(23.33%) 15(10%)	0.045 (NS)
4	<b><u>MENTAL HEALTH CHECKLIST</u></b> Highest Mental Health Lowest Mental Health	46(30.67%) 4(2.67%)	32(21.33%) 18(12%)	27(18%) 23(8.33%)	<b>&lt;0.000*</b> (S)

**P>0.05 = nil significant**

**Figure 3: Comparison of IAT, PHQ-9, HAM-A, and MHC among Government, Private and CBSE School Teachers**

	IAT	PHQ-9	HAM-A	MHC
IAT	<b>0.000*</b>	--	--	--
PHQ-9	--	0.103	--	--
HAM - A	--	--	0.045	--
MHC	--	--	--	<b>0.000*</b>

**P<0.001\*= significant**



**Figure 4: Comparison of the factors of IAT, PHQ-9, HAM-A and MHC with Socio Demographic Variables**

S.No	Factors	Std.Errord	Beta	t	P value
1	GENDER	0.600	0.025	-2.696	0.008 (NS)
2	AGE	0.106	0.40	0.465	<0.000* (S)
3	PLACE	0.66	0.90	-1.466	1.45 (NS)
4	TYPE OF SCHOOL	0.53	0.90	1.467	0.145 (NS)
5	TYPE OF FAMILY	0.82	0.127	1.952	<0.001*(S)
6	SES	0.53	0.58	0.876	0.382 (NS)
7	PHYSICAL ILLNESS	0.53	0.49	-1.099	<0.001*(S)
8	OTHER USE (SOCIAL MEDIA)	0.88	0.010	0.162	0.871

**P<0.001\*= significant**

**Results:**

**Figure 1:** data revealed that most of the male participants (18%) at government school remaining (15.33%) participants were female in government school. Regard (25.33%) participants were Female at private school, (17.33%) were at CBSE school other than government school male participants seems low in other schools. In Government and Private school participants seems high in the age group of between 46-60, but CBSE school most of the participants were younger adults. Regard place of Living Most of the Government school teachers were resided at Village area (13.33%), Private school teachers were resided at Sub-Urban areas (14%) and also CBSE school teachers (18.67%). With regard of working place most of the teachers from Government (15.33%), Private (9.33%), and CBSE (12.67%) schools were working at high school level. Looking into type of family among teachers only government school teachers belongs to nuclear family (18.67%) and others Private (21.33%) & CBSE (19.33%) school belongs o join family respectively. With regard SES most of the government school teachers belongs to Upper middle (16%) and CBSE school teachers similarly with (18%) but Private school teachers participated most with Lower middle SES (14.67%). View into the Physical illness among teachers most of them maintaining good health as well as none of the medical illness in all three type of schools as well as all the school teachers successfully vaccinated related to the prevention of covid-19. Among those teachers all of them using whatsapp to sharing the information, sending the announcement, addressing parents with issues

etc. In the socio-demographic factors between these three groups positively significant with the three areas like, type of family, socio economic status as well as working area of the school.

**Figure 2:** Look into the internet addiction test most of the respondents scored with normal internet addiction in the both government and private school. But CBSE school scores revealed that teachers from that group have mild level of internet addiction and it seems high. All the group members scored low and results predicts with minimal depression and had minimal anxiety while assessing depression factor and HAM-A. Mental health checklist factor shows all those group members had positive and highest mental health. Positive association found in the factors of internet addiction and Mental health.

**Figure 3:** Positive relationship found from the Internet addiction and Mental health among all four factors.

**Figure 4:** From the regression analysis in the factors of internet addction, depression anxiety and Mental health checklist with socio demographic variable positive regression found in the areas of Age, type of family and physical illness.

### **Discussion:**

Results indicated that there is mild level internet addiction found in CBSE school teachers in this study. As discussed earlier there are no teachers found moderate and severe level of internet addiction and also due to working hours there's no study found the internet addiction among teachers. Teachers have playing key role of improving learning to the students during covid-19. They have the roles like intimate the class details to the parents as well as class students by using mobile phone, gadgets the application itself recording the attendance also students they used the link to watch again the classes.

In European country study found in the normal population study based on internet addiction 3-7% adolescent children have severe addiction through the internet. There are number of adolescent related internet addiction studies found epidemiology factors in worldwide but there are no studies that analyze internet addiction among school teachers in India. G Toth et.al in their study found internet addiction was 5% among teachers using problematic internet

questionnaire and lower educational level, having secondary employment also associated with internet addiction.

### **Conclusion:**

Students with internet for both academic as well as nonacademic purpose and teachers were more internet addicted. Enlightening programs about safe internet use, prevention programs, recovery centers, support groups, and integration of training workshops specializing in IA must be encouraged to address this problem, especially among Students. While a student's need to be updated to all the appropriate technology available, the hardship of overuse of these technologies must be documented, studied, examined, and intervened to minimize the potential harm to the individual as well as the society.

### **Disclosure statement:**

No conflict of interest was declared by all authors.

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