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Prevalence and risk factors of internet addiction among health science college students in South India

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ABSTRACT

The commonness of Internet Addiction (IA) among well-being science undergrads has not been accounted for utilizing a huge example. To explain the genuine status of addictive Internet use among well-being science undergrads, this examination meant to assess the commonness and the hazard variables of IA and in danger IA among well-being science understudies in south India. This cross-sectional investigation studied all well-being science undergrad workforces in Kattankulathur Prefecture, a country zone in India. Qualified members included 1165 understudies' students (533 men and 632 women). Members finished a poll on their exercises and factors identified with Internet use. The pervasiveness of IA and in danger IA was 24.7% and 26.8%, individually. Besides, game playing was demonstrated to be Internet action most firmly connected with in danger IA. This examination demonstrated that around 27% of well-being science undergrads in an urban/provincial region in India are in danger of building up a dependence on the internet and that utilizing the internet for game playing is identified within danger IA. Our outcomes propose that well-being science understudies ought to be told to utilize the internet appropriately and rouse to a valuable path for study and information purposes.

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INTRODUCTION

Web compulsion or Internet Addiction (IA) is turning out to be both well-being, and social issue among everybody with the spread of internet get to. Even though internet utilization is important for several sectors (Meri *et al.*, 2019; Jabali and Jarrar, 2018). However, IA alludes to over the top or inadequately controlled distractions, inclinations, or practices concerning internet use, which in the end could prompt pain and utilitarian debilitation (Weinstein *et al.*, 2014).

IA has been demonstrated to be identified with gloom, nervousness, animosity, rest unsettling influence and consideration shortfall hyperactivity issue (ADHD), and liquor reliance (Alavi *et al.*, 2010; Ko *et al.*, 2012). Previous examinations have detailed that the commonness of IA among minors is around 10% around the world (Spada, 2014). The pervasiveness of IA among grown-ups has been accounted for to be around 1.2% to 8%, (Laconi *et al.*, 2015). However, while the distinction in the predominance of IA is accounted for among utilized and jobless grown-ups. (Quiñones-García and Korak-Kakabadse, 2014), as far as anyone is concerned, no investigations have assessed the predominance of IA for the utilized an enormous example independently.

Although there is no accord on formal symptomatic models for IA, past investigations characterized the seriousness of IA utilizing primer cut-off purposes of the IA scale: non-IA was characterized as having full oversight over Internet use, in danger IA was characterized as having ongoing life issues due to excessive Internet use, and IA was characterized as having critical life issues on account of unnecessary Internet use. It has been demonstrated that people within danger IA grow more serious medical issues than those with non-IA and less extreme medical issues than those with IA. This proposes in danger IA just as IA people have some level of risky web use, (Van Rooij *et al.*, 2010).

(Reed *et al.*, 2015) to explain the real status of addictive Internet use among utilized grown-ups, this examination expected to assess the predominance and the hazard elements of IA and in danger IA among well-being science undergrads in India. We utilized prefecture-wide information acquired from the undergrad Personnel Internet Use Survey of a local/urban zone in India.

METHODS

Participants and procedures

The study was a prefecture-wide cross-sectional structure. The objective populace was 1,165 well-being science understudies, i.e., first year, second year, third year, and last year concentrated in rustic/urban zones in India. We sent the investigation data and polls to all well-being understudies in Kattankulathur compass to Prefecture. We requested that all undergrads take an interest in the examination in the well-being science school whose Dean/principals assented to support.

They were educated that the overview was deliberate and that namelessness and secrecy were guaranteed. Every school workforce fixed their finished survey in the envelope, and the understudy volunteers gathered and returned them to us unopened. A finished survey was considered as an agreement to the examination. Among the 28 colleges, 21 universities agreed to take an interest in the examination overview (reaction rate: 90%). Hence, information from 1,165 qualified understudies (533 men and 632 women) was remembered for the investigation.

Measures

The survey comprised of two sections. The initial segment approached members for anecdotal and foundation data, for example, sex, age class, a situation at their school and span of administration for school staff, normal time spent on the internet every day throughout the previous three months (both weekday use and end of the week use for work and relaxation purposes), the exercises occupied with on the internet throughout the previous three months (diversion, games, correspondence, shopping), and the gadgets utilized for Internet access for the last one month (highlight telephone, cell phone, tablet, PC). The second piece of the survey collected some information about IA, which was characterized by utilizing the Internet Addiction Test (IAT), (Young, 1998) The IAT was the most usually utilized measure in past examinations on IA.

(Laconi *et al.*, 2014) Adequate dependability and legitimacy have been exhibited for the scale. The IAT is a self-revealed measure containing 20 things evaluated on a 5-point Likert scale from "not in the slightest degree" (1) to "exceptionally" (5). The absolute score of the IAT ranges from 20 to 100. The all-out score orders IA as follows: non-IA (all out score < 50), in danger IA (all-out score of 50–75), and IA (absolute score $\geq$ 75) (Tonioni *et al.*, 2012). Be that as it may, just a single respondent had an IAT score of $\geq$ 75; along these lines, the members were apportioned into either the in danger IA gathering (IAT score $\geq$ 50) or the non-IA gathering (IAT score < 50), Acceptable internal consistency was acquired in the example (Cronbach's α = 0.74).

Statistical Analysis

We show distinct insights into the entirety of the investigation factors. We thought about socioeconomics, time spent on the internet, exercises on the internet, and gadgets utilized for Internet access between the in-danger IA and non-IA bunches utilizing the $\chi 2$ test, Kruskal-Wallis Test, Mann-Whitney U test and ANOVA Used for over two downright factors. The logical factors hypothetically pertinent to IA were entered at the same time into the model SPSS 21.0 form utilized for Statistical Computing, all

likelihood esteems were two-followed and at a 5% level of importance.

RESULTS AND DISCUSSION

The attributes of the members appear in Table1. The commonness of IA in our investigation was 24.7% (n = 287), with 26.8% (n = 313) as in danger IA and 66.6% (n = 776) as non-IA. Along these lines, we partitioned the respondents into two gatherings: the in-danger IA gathering and the non-IA gathering. In the rest quality yield, 555 (47.6%) understudies have a hazard for dozing, and 323 (27.7%) have a commonness of rest quality yield in this investigation. The predominance of discouragement 39(3.4%), no downturn 42 (3.6%), and danger of sorrow are 287 (24.7%) individually. Female understudy members had more contrast with guys. Web dependence 389 (33.4%) is more contrast with the past investigation and non-web compulsion 776 (66.6%). The age bunch 21 and 22 years are more among their gatherings contrast with other age bunches from Table 1.

Examination between IA-levels and Depression levels utilizing the chi-square test has a factually huge connection between then at 95% ($p < 0.05$), Among the web fixation with tolerably extreme sorrow 276 (70.8%), moderate discouragement 74 (19%) and severe gloom 39 (10.2%). In the non-IA contrast and misery levels, gentle wretchedness 296 (37%), moderate despondency 252 (34%), little sadness 177 (22.1%), no downturn 39 (5.4%), trailed by modestly extreme sorrow 12 (1.5%) and severe melancholy is zero in the non-IA bunch this is a significant finding of this investigation from the Table 2.

Correlation between the web enslavement yield and rest quality yield from the table 3, there is a measurably noteworthy connection between them at 95% ($p < 0.05$) web habit >75 with rest quality yield > 6 is 217(75.4%), IA 51-75 with rest quality yield 4-6 is 222(71%), IA 26-50 with rest quality yield 4-6 is 207(51.9%) and IA 0-6 with rest quality yield is 112(66.7%) are more contrast with otter classifications in Table 3.

Mean IAT scores were 83.51 (standard deviation [SD], 4.59), and 62.65 (SD, 6.46) in the in-danger IA and non-IA gatherings, individually. The in-danger IA bunch had a fundamentally higher bit of possessing cell phones and tablets yet a lower bit of claiming highlight telephones. There were bunch contrasts identified with depression from Table 4.

Mann-Whitney-U-tests indicated that the in-danger IA bunches penda longer time on the internet paying little heed to the day of week or motivation behind use than the non-IA gathering. There is a measurably critical distinction among IA and non-IA bunches utilizing Mann-Whitney Test and middle test $p < 0.0001$. From Table 5 examinations among the downturn levels in the investigation have exceptionally extraordinary one another and the $p < 0.0001$ utilizing the Kruskal-Wallis Test.

Reasonably Severe Depression 302 (56.6) and Severe Depression 38 (7.1%) are more in guys contrast with females. Yet, Minimal Depression 143 (22.7%), Mild Depression 237 (37.5%), Moderate Depression 202 (32%) and No Depression 36 (5.8%) are more in females contrast with guys implies females influenced more contrasted with guys in this examination from the Table 6.

As demonstrated in this document, the numbering for sections upper case Arabic numerals, then upper case Arabic numerals, separated by periods. Initial paragraphs after the section title are not indented. Only the initial, introductory paragraph has a drop cap.

DISCUSSION

So it advocated the worry with the outstanding task at hand. Pay is a significant deciding variable behind the feeling of anxiety of instructors. Yet, our examination found that feeling of anxiety was high in the administration teachers than private. It tends to be clarified by the way that instructors in a legislative position like Head Master/Assistant Head Master got more significant compensations to contrast with private. However, the explanation of their feeling of anxiety was high. Hence, we need further investigation required to recognize factors that lead to pressure and burnout in legislative and non-public schools (Doss *et al.*, 2018)

Our investigation indicated that around 27% of undergrads in India appeared in danger IA, while few had IA; furthermore, the outcomes demonstrated that in danger IA was emphatically connected with the two ages more than 20 and gaming on the internet. This examination explained the pervasiveness of IA and in danger IA and the hazard factors among understudies in India. In Asian nations, despite there being numerous investigations of minors, moderately hardly any examinations on IA have been directed among understudies utilizing a huge example, (Wu *et al.*, 2015).

In this way, this investigation is significant for finding different outcomes in IA among undergrads in an Asian nation. The outcomes acquired showed that there was a lower pervasiveness of IA in correlation with that in past investigations. This higher commonness noticed in our investigation might be

Table 1: Shows the characteristics of the variables

		N	%			N	%
Gender	Males	533	45.7		Minimal	171	14.6
	Females	632	54.3		Mild	287	24.7
	18 Years	13	1.1	Depression Levels	Moderate Depression	338	29.0
	19 Years	86	7.4		Moderately Severe	287	24.7
Age	20 Years	164	14.1		Severe	39	3.4
	21 Years	363	31.2		No Depression	42	3.6
	22 Years	340	29.2	IA-Levels	non–IA	776	66.6
	23 Years	199	17.1		IA	389	33.4
Sleep	Score 0-3	288	24.7	Internet	Score 0-25	167	14.3
Quality	Score 4-6	555	47.6	Addiction	Score 26-50	398	34.2
Output	Score > 6	323	27.7	Output	Score 51-75	313	26.8
					Score > 75	287	24.7

Table 2: Shows the relationship between depression levels and IA Levels

		IA Levels				
		non-IA N (%)	IA N (%)	Total N (%)	Chi-Square Test	p-value
Depression Levels	Minimal	177(22.1)	0(0)	177(14.7)	369.10 5 df	0.0001 ***
	Mild	296(37)	0(0)	296(24.7)		
	Moderate	252(34)	74(19)	326(29)		
	Moderately Severe	12(1.5)	276(70.8)	288(24.7)		
	Severe	0(0)	39(10.2)	39(3.4)		
	No Depression	39(5.4)	0(0)	39(3.6)		
Total		325(100)	776(100)	1165(100)		

***There is a statistically significant association between sleep quality output and Internet addiction output among college students at 95% ($p < 0.05$)

Table 3: Shows the Association between Internet Addiction levels and Sleep Quality Levels

		Internet Addiction Output Score						
		0-25 N (%)	26-50 N (%)	51-75 N (%)	>75 N (%)	Total N (%)	Chi-Square Test	p-value
Sleep Quality Output Score	0-3	112 (66.7)	176(44.3)	0(0)	0(0)	288(24.7)	305.632 6 df	0.0001 ***
	4-6	55(33.3)	207(51.9)	222(71)	70(24.6)	555(47.6)		
	> 6	0(0)	15(3.8)	91(29)	217(75.4)	322(27.7)		
	Total	167(100)	398(100)	313(100)	287(100)	1165(100)		

***There is a statistically significant association between sleep quality output and Internet addiction output among college students at 95% ($p < 0.05$)

Table 4: Shows the Significance difference among the Internet Addiction and Depression levels

Internet Addiction Score	Mean	SD	Anova	p-value
0-25	17.68	5.421		
26-50	38.04	7.684		
51-75	62.65	6.466	1920.45	0.0001
>75	83.51	4.592		***
Depression Levels				
Minimal	3.05	1.157		
Mild	7.15	1.342		
Moderate	11.84	1.552	1556.52	0.0001
Moderately Severe	16.76	1.393		***
Severe	20.41	0.507		
No Depression	0.00	0.00		

Table 5: Shows the significance comparison between IA and non-IA, depression

			Percentiles			Mann-Whitney Test/ Kruskal-Wallis Test	p-value
	Mean	SD	25th	50th (Median)	75th		
IA and non-IA	22.47	11.65	12.00	18.00	36.00	239.50M	***0.0001
Depression	10.47	5.50	6.00	10.00	15.00	473.87K	***0.0001

Table 6: Shows the Association between Depression levels, IA Levels and Gender

		Gender				
		Male N (%)	Female N (%)	Total N (%)	Chi-Square test	p-value
Depression Levels	Minimal	20 (3.8)	143 (22.7)	164 (14.7)		
	Mild	38 (7.1)	237 (37.5)	275 (24.7)		
	Moderate	133 (25)	202 (32)	335 (29)	254.2	0.0001
	Moderately Severe	302 (56.6)	9 (1.4)	311 (24.7)	5 df	***
	Severe	38 (7.1)	4 (0.7)	42 (3.4)		
	No Depression	2 (0.5)	36 (5.8)	38 (3.6)		
IA Levels	non-IA	120 (22.6)	623 (98.6)	744 (66.6)	318.336	0.0001
	IA	413 (77.4)	9 (1.4)	421 (33.4)	1 df	***

***There is a statistically significant association between gender with depression levels and IA levels among the health science college students at 95% ($p < 0.05$) using a chi-square test.

incompletely owing to the consideration of just well-being science understudies. Studying may keep them from utilizing the internet immeasurably and restrain the movement of IA. Conversely, the current commonness of in danger IA is nearly not proportional to that revealed in Western nations.

The outcomes propose littler contrasts in the predominance of in danger IA among IA and non-IA grown-ups. We saw in danger IA as related to the two ages more than 30 and gaming on the internet. Our outcomes on the relationship between younger age and in danger IA are like recently announced outcomes in well-being science understudies. This might be because the more youthful age bunch is increasingly acquainted with utilizing the internet because of presentation to the Internet condition from youth (Bergmark *et al.*, 2011).

In any case, an affiliation was found among sex and in danger, IA. Albeit past investigations have announced that men were bound to show IA and in danger IA in minors, a past report has proposed that a connection among IA and sex contrast exists in grown-ups. Hence, we could discover no sexual orientation distinction because of the incorporation of just grown-up members in this investigation from table 6. Like past examinations on the relationship among IA and web-based gaming in grown-ups, our outcomes likewise demonstrated that web-based gaming is one of the hazard factors for in danger IA as opposed to different exercises on the internet. It is accounted for that web-based gaming is all the more emphatically identified with IA in examination with different exercises on the internet, (Strittmatter *et al.*, 2015)

Likewise, the Diagnostic and Statistical Manual of Mental Disorders fifth ed. (DSM-V) 31 alludes explicitly to the dependence on web-based games (i.e., Internet Gaming Disorders). IA brought about by gaming gorges may result not just from a fascination with the game itself yet additionally from the bidirectional correspondence happening during web-based gaming, (Balhara *et al.*, 2019) the study recommends PIU among building undergrads in India is a significant general well-being concern.

There is a need to make mindfulness among understudies, rising grown-ups, guardians, and concerned specialists about the damages related to PIU. Moreover, there is a need to execute preventive procedures for instilling example of sheltered and sound web utilization among them. What's more, there is a need to create general well-being strategies for the avoidance and treatment of PIU and direct further exploration to upgrade our comprehension of the equivalent. Some internet games empower ongoing interaction with other web-based game players (e.g., greatly multiplayer online pretending games). These games may give chances to impart different players and get profound respect for commitments to a game errand and make it hard to play internet games at one's own pace (Buckner *et al.*, 2012).

Consequently, it could negatively affect an individual's capacity to control web-based gaming. Grown-ups should be given intercession for the counteraction and treatment for IA and in danger, IA. Unreasonable Internet use can cause rest issues, general weakness, and mental issues. It might diminish both mental and physical well-being among undergrads with IA, (Ivezaj *et al.*, 2017).

Our outcomes propose that undergrads ought to be furnished with data and psychological wellness administrations to utilize the internet appropriately to improve their emotional well-being. A comparable report examined the pervasiveness of IA in India in an enormous companion of junior and senior well-being science understudies, (Mihara *et al.*, 2016).

The examination announced a higher commonness of IA in correlation with the aftereffects of the current investigation and sex contrasts in predominance, which might be a direct result of contrasts in the age of the member between the investigations. Concerning hazard factors for IA, web-based gaming was related to IA in the two investigations. Interestingly, in their examination, long-range informal communication administrations were related to IA in female understudies. In the current examination, the members were grown-ups, and that may halfway clarify the absence of the connection between correspondence on the Internet and IA,

(Cherian *et al.*, 2018) IA was available among a significant extent of college understudies which can restrain their scholarly advancement and affect their mental well-being. Early recognizable proof of hazard components of IA can encourage the compelling counteraction and opportune commencement of treatment systems for IA and mental misery among college understudies.

This study has several limitations. First, our study uses a cross-sectional design, which does not prove a causal relationship. Second, since there is no consensus on the formal diagnostic criteria and gold-standard measures for IA, the diagnostic accuracy properties of the IAT cut-off scores are yet to be established. Third, the participants are limited to health science college students in a rural area in India. Thus, the results can be generalized to populations with different backgrounds. Furthermore, college students may not be representative of all of

the employed population, even though the sample included college students only who studied in the health science colleges, as well as students.

CONCLUSIONS

In conclusion, this study showed that around 27% of health science college students in a rural area in India are at risk of developing an addiction to the internet. At-risk IA was found to be associated with the use of the internet for game playing. Our results suggest that college professors should be instructed to use the internet properly.

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Conflict of interest

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