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PREVALENCE OF INTERNET ADDICTION IN THE ELDERLY POPULATION- CROSS-SECTIONAL STUDY

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ABSTRACT

Internet addiction among elderly population is common. There is limited high-quality research that pertains to this from India. There is a lack of data on the prevalence of Internet addiction among the elderly population from India. Hence we embark on this cross-sectional study to find the prevalence of Internet addiction among individuals aged 60 and above. To estimate the prevalence of internet addiction in the elderly. A cross-sectional study sample comprising elderly individuals in southern Tamil Nadu was conducted after obtaining Institutional Ethics Committee approval. They were assessed with constructed semi-structured proforma and the Young Internet Addiction test. Of the 300 elderly who participated in the study,72.3% were male and 27.7% were males. Of the total 78.3% had no addiction, 13% had mild internet addiction,7% had moderate internet addiction and 1.7% had severe addiction. This study addresses a significant research gap by focusing on the elderly population in India. The study's findings can guide future research on Internet addiction among the elderly.

Keywords- Internet addiction, elderly population

INTRODUCTION:

The Internet has become extremely popular today as it plays an immense role in daily activities and has highly transformed our lives. Undoubtedly, it has made the present generation both young and old live a life without the internet certainly impossible. The Internet has revolutionized communication, enabling global connectivity through email and social networking sites. Additionally, online shopping and banking have significantly saved time and effort, allowing people to purchase goods and manage finances from home with ease. Several studies have highlighted the advantages of internet use for seniors, noting that it can enhance connections with family and friends, foster new relationships, and reduce social isolation and loneliness. [1]. The Internet offers entertainment, sustains social engagement, and provides a sense of empowerment and control, which collectively enhance mental health, life satisfaction, and overall quality of life. [2]. The use of the Internet for telemedicine might also be beneficial for seniors, as it enables them to easily access medical consultations, receive timely healthcare advice, manage chronic conditions, and reduce the need for frequent in-person visits, thereby improving their overall health and well-being [3].

However, it also got its demerits**.** The increase in daily internet consumption has affected many people's careers and relationships making it a major cause of concern. A longitudinal study has shown that using the Internet during midlife is significantly associated with a reduced incidence of dementia. [4]

A recent meta-analysis including 113 epidemiologic studies covering 693,306 subjects showed that the pooled prevalence of internet addiction was 7.02% (95% CI, 6.09–8.08%) in the population aged 7–60 years. General population surveys show a prevalence of 0.3-0.7%.[5]. Almost 20 to 67% of people aged over 55 years old are connected to the Internet [6]

MATERIALS AND METHODS:

Study design

This cross-sectional, observational study was conducted after the institutional ethics committee approval for three months. We used a consecutive sampling method to induct individuals for the study. Participants were recruited after explaining the nature of the study and after obtaining informed consent. The basic sociodemographic details were documented. The level of Internet addiction among the elderly was measured using Young's Internet addiction scale. The levels of Internet addiction were analyzed. The elderly who had scores indicative of addiction were duly informed about it, with suggestions for further evaluation and treatment if necessary.

Assessments

A semi-structured interview schedule was developed for the present study. This contains two parts:

A. Sociodemographic Data: Age, gender, religion, marital status, occupation, living arrangement, habitat, and socioeconomic status based on modified kuppusamy scale.

B. The Internet Addiction Test (IAT), also known as Young's Internet Addiction Scale, designed by Young, was used for assessing the IA (Internet Addiction) of adolescents. The IAT is a 20-item self-reported scale. Questions included in the scale specifically reflect typical behaviors of addiction related to IA. The IAT has strong internal consistency (a = 0.90–0.93) and good test-retest reliability (r = 0.85) values. The IAT total score ranges, with a higher score

representing the higher level of severity of Internet compulsivity and addiction. Total scores that range from 0 to 30 points are considered to reflect a normal level of Internet usage; scores of 31 to 49 indicate the presence of a mild level of Internet addiction; 50 to 79 reflect the presence of a moderate level; and scores of 80 to 100 indicate a severe dependence upon the Internet.

Procedure

400 Participants aged ≥ 60 years from the university were screened initially, out of which the sample for this study comprised 300 participants who met specific inclusion and exclusion criteria. Inclusion criteria encompassed individuals aged 60 years and above, those actively using the internet, and a willingness to provide informed consent for study participation. Conversely, exclusion criteria involved participants who were unwilling to participate or lacked internet connectivity.100 participants were excluded from the study, 72 individuals reported not using internet connectivity and 28 individuals failed to give consent for the study.

The meticulous screening process to ascertain compliance with these criteria was conducted by a principal investigator, ensuring the selected participants were aligned with the study's defined parameters. 300 Participants who completed the questionnaire were included in the analysis (Figure 1)

STATISTICAL ANALYSIS

The data were analyzed using SPSS version 20. Descriptive and inferential statistics were carried out for different variables and outcomes. Descriptive statistics such as frequency(%)and the range were administered for quantitative and qualitative variables of data respectively. A chi-square test was used to assess the association between demographic variables and internet addiction. P value <0.05 was considered for statistical significance.

RESULTS:

The demographic characteristics of surveyed population primarily consisted of individuals aged 60 and above, with 70% falling into the 60–69 age bracket, 25.3% in the 70–79 age range, and 6.7% aged 80 and above. Gender distribution showed 63.7% male and 36.3% female participants. In terms of religious affiliation, 88% identified as Hindus, 6.7% as Christians, and 5% as Muslims. Marital status indicated that 88.3% were married, 0.7% unmarried, and 11% either widowed or separated. Living arrangements revealed 77.3% residing in nuclear families and 22.7% in joint families. Employment status showed 22.7% were employed, 43.3% unemployed, and 34% retired. Socioeconomic status distribution was 16.7% lower class, 66.6% middle class, and 16.7% upper class. Geographical background included 51% from rural areas and 49% from urban areas.

Among the subset of participants who reported substance use, 12% exhibited signs of internet addiction. Participants with medical conditions showed a prevalence of 54.7%, while those with psychiatric conditions showed 4% with internet addiction. Notably, 29.3% of participants using the internet for work displayed signs of addiction.

The study identified an overall prevalence rate of 21% for internet addiction, categorized as 13% mild addiction, 7% moderate addiction, and 1% severe addiction.

Correlations and Patterns

Internet usage patterns varied across demographic categories.Older age groups showed a lower prevalence of internet addiction.Males spent more time on the internet compared to females.Married individuals and retirees exhibited higher rates of internet addiction.Hindus and Christians showed higher prevalence compared to Muslims.Participants from nuclear families, urban areas, and middle-class backgrounds demonstrated higher internet usage.

Figure 2 illustrates the distribution of internet addiction severity among the 300 participants, with 78.75% showing no addiction, 12.7% mild addiction, 6.7% moderate addiction, and 2% severe addiction. The study's prevalence rate for internet addiction falls within a confidence interval of 16.8% to 26.4%.

DISCUSSION:

There were many cross-sectional studies done in other age groups but lacking in this group. Moreover, Internet addiction not classified in DSM-5 and ICD-10 guidelines. Most of the earlier studies done were either critical appraisal or review of literature or metanalysis and there was no comparison between addicted and non-addicted groups regarding the sociodemographic profile and to find out the prevalence in this particular elderly group above 60 years. Similar to previous studies,male gender is a risk factor for addiction[7,8]

A search of the Medline database revealed no studies focused specifically on problematic Internet use in individuals over 60 years old. Only three studies were found that included participants aged 55 and older. These studies indicated the presence of problematic Internet use in this subgroup, but did not provide specific data for those over 60. [9] In a systematic study and meta analysis among Indian school-going adolescents, the prevalence of moderate and severe problematic Internet use (PIU) was found to be 21.5% (95% CI: 17.0%–26.8%) and 2.6% (95% CI: 1.6%–4.2%), respectively, based on the Young Internet Addiction Test cutoff points of 50 and 80. [10]. In another study among 188 medical students, 46.8% found to have higher risk for Internet addiction. [11]. where else in our study prevalence was 16.8 to 26.4% which is low comparatively to the adolescents group.

In terms of risk factors, kunyu et al demonstrated that frequent social media communication was linked to reduced loneliness, even after accounting for prior levels of loneliness. This relationship was mediated by perceived social support and social contact. [12]. In another study, they observed that depression, anxiety, and interpersonal sensitivity were identified as correlated with Internet addiction. Additionally, low self-esteem has been linked to potential Internet use among college students. [13]. These were not observed in our study.

To minimize sampling bias, participants were not recruited through email, group networks, or websites intended for Internet or other addicts, thus avoiding a self-selected sample of individuals with specific interest or psychological investment in the topic. Additionally, the investigator who administered the scale promptly addressed any uncertainties regarding the questionnaire..

Some of the limitations in our study were descriptions like internet usage in which part of the day, the daily time interval of internet usage, which platform of social media and used for what purpose(goal-learning/working, internet gaming, chat, and other contents were not observed in this study. Since the survey relied on questionnaires, no physical examination was conducted. Evaluation for obesity, metabolic syndrome and neurological investigations were not observed. The role of internet addiction in affecting their day to day life was not included as a part of the questionairre. Generalisability was lacking in this study. Since

participants were asked to report their past Internet exposure and use, there is a possibility of recall bias, and participants may have also responded in a socially desirable manner to present themselves positively. We haven't found various addictions like social media addiction, cybersex addiction, smartphone addiction, and game addiction. Finally, follow-up was not carried out which could be considered in future studies

To conclude, the study's findings can be used to raise awareness about the risk of internet use among healthcare providers, caregivers, and the elderly themselves .

TABLE

The sociodemographic data of the study participants are shown in the above table.

DEMOGRAPHICS	VARIABLES	INTERNET ADDICTION		P-VALUE
		YES	NO	
AGE	60-64	29 (21.8%)	104 (78.2%)	0.563
	65-69	16 (20.8%)	61 (79.2%)	
	70-74	9 (16.4%)	46 (83.6%)	
	75-79	5 (33.3%)	10 (66.7%)	
	>79	6 (30%)	14 (70%)	
GENDER	MALE	45 (23.7%)	145 (76.3%)	0.264
	FEMALE	20 (19%)	90 (81%)	
MARITAL STATUS	MARRIED	56 (21.1%)	209 (78.9%)	0.546
	UNMARRIED	0 (0%)	2 (100%)	
	WIDOWED /SEPARATED	9 (27.3%)	24 (72.7%)	
RELIGION	HINDU	59 (22.3%)	205 (77.7%)	0.150
	CHRISTIAN	6 (30%)	14 (70 %)	
	MUSLIM	0 (0%)	15 (100%)	
OCCUPATION	EMPLOYED	16 (23.5%)	52 (76.5%)	0.052
	RETIRED	29 (28.4%)	73 (71.6%)	
	UNEMPLOYED	20 (15.4%)	110 (84.6%)	
LIVING ARRANGEMENT	JOINT FAMILY	20 (28.6%)	50 (71.4%)	0.109
	NUCLEAR	45 (19.6%)	185 (80.4%)	
HABITAT	RURAL	29 (19.5%)	120 (80.5%)	

	RURAL, URBAN	1 (25%)	3 (75%)	0.573
	URBAN	36 (24.5%)	111 (75.5%)	
SOCIOECONOMIC STATUS	LOWER	7 (14%)	43 (86%)	0.085
	MIDDLE	42 (21%)	158 (79%)	
	UPPER	16 (32%)	34 (68%)	

FIGURE
FIGURE 1

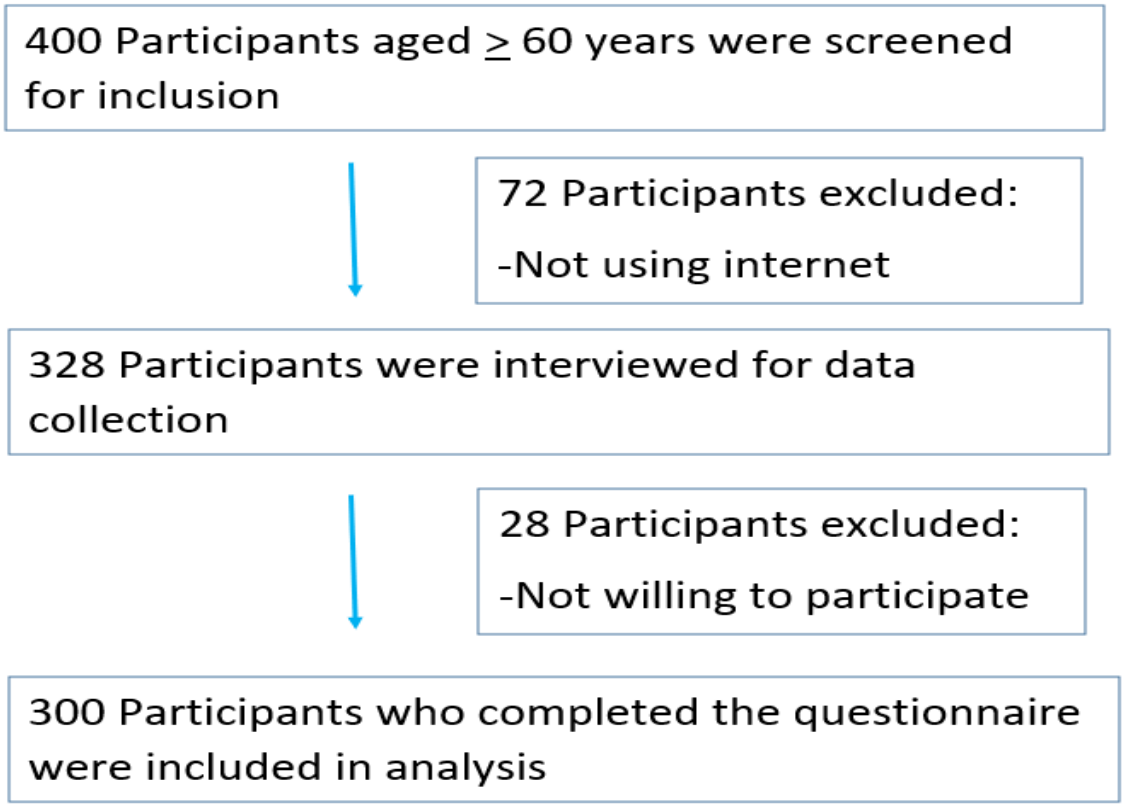

FIGURE 2

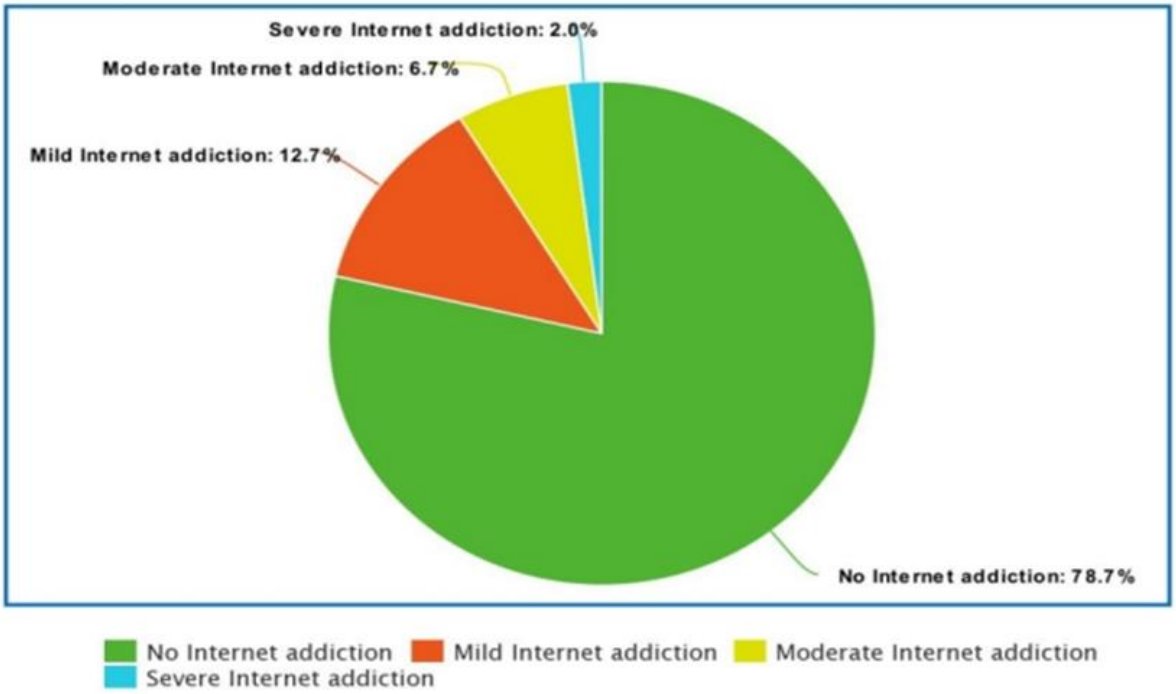

FIGURE LEGENDS

FIGURE 1- The flowchart of the study

FIGURE 2 -Pie chart of prevalence of the internet addiction in the elderly population

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Final approval of manuscript- All authors

COMPETING INTERESTS:

The authors declare that there are no potential conflicts of interest concerning the research, authorship, and/or publication of this article

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