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Original Article

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A Study on the Problematic Internet Use in Telangana Undergraduate Medical Students

Md Adil Faizan[1], Koneru Kavya Sri[2], Pramod Kumar Reddy Mallepally[3]

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Abstract

The proportion of problematic internet usage (PIU) varies from 7.3 to 51% globally due to population variety. The purpose of this study is to identify correlates of problematic internet use among telangana undergraduate medical students and to develop a model for distributing new courses across different internet user groups.

Material and Methods: From May 1 to June 30th, 2022, 201 medical undergraduate students at medical colleges in Telangana participated in a cross-sectional survey. Demographic data and elements affecting PIU were gathered using a semi-structured, pre-tested questionnaire. PIU was evaluated using Dr. Kimberly Young's Internet Addiction Test (IAT) instrument. In order to evaluate the correlates of PIU, binary logistic regression has been used, and step-wise discriminant analysis (DA) has been used to create a model for allocating new subjects among different groups of internet users. The statistical analysis was performed using SPSS Inc.'s (Chicago, IL) Statistical Package for Social Sciences (Trial version 27.0).

Result: PIU was present in all 41.3 percent of the individuals. However, in binary logistic regression, chatting, emotional support, and watching online adult content were significant risk factors for PIU. Univariate analysis demonstrates that internet use for emotional support, watching adult content, and gambling were significantly linked with PIU. The average and problematic internet user categories were accurately assigned to 66.2 percent of respondents by the discriminant model.

Conclusion: The foundation course of the curriculum implementation support programme (CISP) for MBBS students could include a discussion of problematic internet use and its possible negative effects.

Keywords: Problematic Internet Usage; Medical Students; Gambling; Adult Content.

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INTRODUCTION

Over the past two decades, there has been a significant increase in internet usage. Over 803 million individuals worldwide have access to the internet, according to recent statistics by global reach.[1] Numerous studies have been conducted on the advantages of the internet, which include communication, health related services, online financial transactions, trading, purchasing items, entertainment, etc.[2] Researchers discovered that

73% of college students used the internet at least once per day and typically logged on for 1.6 to 4.5 hours per day, particularly at night.[2-5] The prevalence of problematic internet use (PIU) varies from 7.3 to 51 percent globally due to population diversity, different instruments, cut-off scores used, and different sample characteristics[6-11], whereas in India, it ranges from 7.45 to 19.85 percent among undergraduate medical students.

Researchers have examined the global consequences of problematic internet use (PIU) and found that PIU was linked to a variety of social and psychological issues, including academic failure, low self esteem, psychological distress, sleep deprivation, social withdrawal, poor diet, and cardiopulmonary complications.[13-15] The mean scores of the SCL-90-R's four areas of anxiety, depression, paranoid ideation, and obsessive compulsive behaviour were lower in people without PIU than in people with PIU.[16,17]

Researchers have suggested that a number of socio-demographic, individual, and internet related factors are connected to problematic internet use. Male gender[4,18], early years of the study course, peer influence, always logged in status, online interaction with friends, chat, watching porn, online new friendships or relationships, online shopping, average daily time spent on the internet, and internet access modalities were some of the risk factors for problematic internet use. Correlates of problematic internet use among south Indian undergraduate medical students, however, have not yet been thoroughly studied. Additionally, no studies have shown a model for forecasting problematic internet use in a new subject. With the help of a model for resource allocation, this study will evaluate the correlates of problematic internet use among telangana undergraduate medical students.

MATERIAL AND METHODS

From May 1 to June30, 2022, 201 undergraduate students from medical institutions in Telangana, India, participated in a cross-sectional study. All first-year medical students in Telangana who had used the internet at least once in the previous six months were eligible to participate in the study. People who refuse to consent are excluded.

Calculation of sample size: There were 300 students enrolled in the medical college, 100 in each cohort. The sample size was determined by assuming a population size of 300 and a prevalence of PIU of 50% at a level of 95% significance and 5% precision.

$$n = [Np\ (1-p)]/[(d2/Z21-\alpha/2*(N-1) + p*(1-p)]$$

Where, n= sample size, N= population size, p =prevalence, d=precision.

The needed minimum sample size equals 169; with a 10% non-response rate, the actual minimum sample size was 188. We looked at and examined data from 201 students.

QUESTIONNAIRE DESIGN AND VALIDATION

On 20 undergraduate students, a semi-structured questionnaire was pretested. Following the pre-testing, some questions were altered. For the benefit of the respondent, certain questions' wording was improved. The open ended questions on reasons for using the internet were changed to 15 closed ended questions with the dichotomous answers "Yes" or "No" (According to the responses received), and one open ended question was added for any additional reasons for using the internet. This pre-tested survey was used to gather data on the respondents' age, gender, socioeconomic status, place of residence, year of enrollment, possession of a device (computer, laptop, mobile, tablet), and questions about their internet usage, such as where they prefer to access the internet (at home, a cybercafé, or somewhere else) and how long they have been using it, how much do you spend monthly on the internet on average? Questions about the reasons people use the internet, including: Why do you use it (for communicating with friends and family, for course work or assignments, for research on new developments or in areas of interest, for browsing, for news updates, for relaxation or recreation, for meeting new people, for chatting with others to share interests or fantasies, for time pass, for emotional support, for job searching, for adult only content, for games, for shopping, etc.)? How much time do you spend each week on websites like Whatsapp, online movies, online shopping, search engines (like Google and Bing), adult content sites, email, torrent download, duration of internet use, monthly internet spending, Snapchat, Twitter, YouTube, Facebook, newsgroups, and gaming sites, spiritual content, music/songs, and Instagram.

We evaluated PIU using the Internet Addiction Test (IAT) scale developed by Dr. Kimberly Young.[20] The IAT is a 20 items test that assesses the level of self reported internet compulsiveness. Each question is scored from 0 to 5 on a 6 points Likert scale: 0 = Not Applicable, 1 = Rarely, 2 = Occasional, 3 = Frequently, 4 = Often, and 5 = Always. This questionnaire has a scoring range of

0 to 100; the higher the score range, the more severe the addiction. Internet users who scored between 50 and 100 were classified as "problematic internet users," whereas those who scored between 50 and 100 were classified as "average internet users." According to the research, the Cronbach's alpha was 0.889 [95 percent confidence interval (CI) 0.884-0.895]. Low, at 0.049[21], was the alpha's standard deviation. High internal consistency was found in the current investigation, with an alpha coefficient of 0.889 (CI 0.867-0.911).

DATA COLLECTION

We divided undergraduate students into groups based on the year they were admitted, enrolling at least 50 students from each group. We have established the standard that each class must have at least 60% of the total enrollment. Ninety percent of the current pupils were picked at random from the group using computer-generated random numbers after being given a serial number. Each admittance year student had their data collected just once. Students who were chosen at random were given a semi-structured, pre-tested questionnaire, which they were required to complete once. The participants had been given an explanation of the study's goals and purpose by the researchers. Participants were made aware that taking part is completely optional and has no bearing on their academic standing.

DATAMANAGEMENTANDSTATISTICAL ANALYSIS

We have established the standard that each class must have at least 60% of the total enrollment. Ninety percent of the current pupils were picked at random from the group using computer-generated random numbers after being given a serial number. Each admittance year student had their data collected just once. Students who were chosen at random were given a semi-structured, pre-tested questionnaire, which they were required to complete once. The participants had been given an explanation of the study's goals and purpose by the researchers. Participants were made aware that taking part is completely optional and has no bearing on their academic standing.

A discriminant function, which is a linear combination of the weightings and scores for these variables, is produced by the analysis. The maximum number of functions is equal to the smaller of either the number of predictors or the number of groups minus one.[22] Determine a regression style linear equation, such as one used in discriminant analysis, to forecast which category the case belongs to. The equation or function has the following form:

$Zjk = a + W1X1k + W2X2k + ... + WnXnk.$

Where:

Zjk = Discriminant Z score of discriminant function j for object k.

a = Intercept.

Wi = Discriminant coefficient for the Independent variable i.

Xik = Independent variable i for object k.

n = number of predictor variables.

RESULTS

In the current study, we analysed the data of 201 respondents, the majority of whom were under the age of 20. About two thirds of the individuals were male, and 96% of them practised Hinduism. 76.1 percent of the individuals come from nuclear families and have upper or upper middle SES (84.6 percent). More than half of the research participants (55.7%) stayed in the hostel, 36.3 percent, 36.2 percent, and 26.9 percent of the study participants were in their second years, third years, and first years, respectively (Table 1).

Table 1: Shows the distribution of study participants' sociodemographic data (N = 201).

Variable	Frequency(%)
Age	
<20 years	59(29.4%)
>20years (20years)	142(70.6%)
Gender	
Male	132(65.7%)
Female	69(34.3%)
Religion	
Hindu	193(96%)
Muslim or Christian	8(4%)
Type of family	
Nuclear	153(76.1%)
Large	48(23.9%)
Socio economic status	
Upper and upper middle	170(84.6%)
Lower and lower middle	31(15.4%)
Hostel accommodation status	
Hostellers	112(55.7%)

Day scholars	89(44.3%)
Admissions year	
First year (2021)	54(26.9%)
Second year (2020)	73(36.3)
Third year (2019)	74(36.8%)

The internet was first used by two thirds of the survey participants in their early adolescent years. Only 11.4% of research participants used the internet for more than ten years, and the majority of participants (60.7%) only used it for six to ten years. 99% of the participants in the research owned a smart phone, whereas 51.7% owned a laptop, 31.3% owned a PC, and 24.4% owned a tablet. Only 15.4% of the participants owned every electronic device mentioned above. Ninety nine percent of the participants preferred using cell phones to access the internet. More than half (51.7%) of research participants preferred using the internet at night, while only 9% preferred using it in the morning. The majority of participants utilise the internet on a daily basis. 72.1 percent of the individuals used the internet for less than 5 hours per day, while only 6 percent used it for more than 10 hours each day. Only 10% of the survey participants had spent more than INR 500 per month on the internet, and more than half (50.7%) of the participants had spent less than INR 150 per month. 41.3 percent of study participants had PIU, and 60.7 percent were continuously logged in (Table 2).

Table 2: Shows how study participants (N = 201) typically utilise the Internet.

Variable	Frequency	Percentage
Age at first internet use		
5–10 years	32	15.9
11–15 years	133	66.2
16–20 years	36	17.9
Duration of internet use		
1–5 years	56	27.9
6–10 years	122	60.7
>10 years	23	11.4
Ownership of electronic gadget with internet access*		
Smartphone	199	99
Laptop	104	51.7
Computer	63	31.3
Tablet	49	24.4
All	31	15.4
The Most Common Mode of Internet access		
Smartphone	199	99
Computer	2	1
Internet use per week		
7 days	192	95.5
2–6 days	9	4.5
Preferred time to use internet		
Day (6 am to 5 pm)	18	9
Evening (5 pm–10 pm)	79	39.3
Night (10 pm-5 am)	104	51.7
Internet use Per Day		
≤5 Hours	145	72.1
6–10 Hours	44	21.9
>10 Hours	12	6.0
Money spent on the internet per month		
INR 1–150	102	50.7
INR 151–300	48	23.9
INR 301–500	31	15.4
INR >500	20	10
Log in status		
Permanently login	122	60.7
On and off	79	39.3
Problematic internet use		
Yes	83	41.3
No	118	58.3

* MULTIPLE RESPONSE

The most common uses of the internet were found to be for job or school related purposes, friend communication, browsing, leisure or relaxation, passing the time, shopping, and news updates, accounting for 99, 98.5, 98, 97.5, 96, 92.5, and 90 percent of all usage, respectively. A little more than 21% of the subjects gambled online (Fig. 1). However, in binary logistic regression, talking,

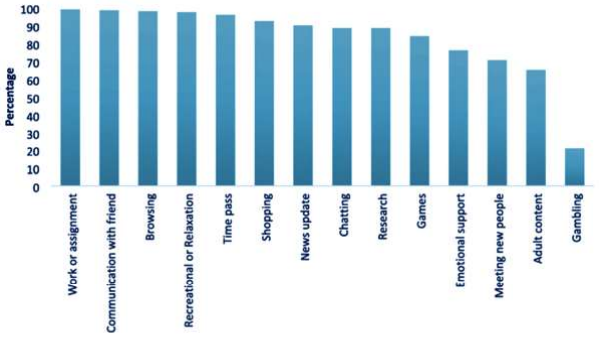

Fig. 1: Reasons of internet use among study subjects (N=201)

emotional support, and watching online adult content were found to be significant risk factors for PIU. Univariate analysis reveals that internet use for gambling, watching adult content, and emotional support were substantially related with PIU (Table 3).

Table 3: Shows the relationship between several risk variables and problematic internet use (N=201).

Variable	Average Internet users (118)	Problematic Internet users (83)	Unadjusted OR (95% CI)	Adjusted OR (95%CI)
Gender (Male)	76	56	1.15 (0.63–2.08)	0.68 (0.32–1.46)
Permanent residence (Delhi)	93	59	1.51 (0.79–2.89)	0.49 (0.21–1.10)
Hostel accommodation status (Yes)	67	45	0.90 (0.51–1.59)	0.63 (0.31–1.31)
Admission year (2016 & 2017)	85	62	1.15 (0.61–2.17)	1.352 (0.65–2.80)
Age at first internet use (>10Years)	18	14	1.13 (0.53–2.42)	1.34 (0.55–3.28)
Preferred time of day for internet access (Evening or Night)	105	78	1.931 (0.66–5.64)	2.62 (0.78–8.86)
Work or assignment (Yes)	117	82	1.4 (0.09–23.14)	1.35 (0.06–30.16)
Communication with friend (Yes)	117	81	2.90 (0.26–32.39)	1.31 (0.08–20.98)
Browsing (Yes)	116	81	1.43 (0.20–10.38)	1.77 (0.19–16.08)
Recreational or Relaxation (Yes)	115	81	0.95 (0.16–5.79)	0.24 (0.02–3.38)
Wasting time (Yes)	112	81	0.46 (0.09–2.34)	1.14 (0.17–7.50)
Shopping (Yes)	110	76	1.27 (0.44–3.64)	1.95 (0.55–6.91)
News update (Yes)	107	74	1.18 (0.47–3.00)	0.96 (0.31,2.99)
Chatting (Yes)	106	72	1.35 (0.57–3.23)	3.44 (1.02–11.53) *
Research (Yes)	106	72	1.35 (0.565–3.23)	2.04 (0.62–6.66)
Games (Yes)	98	71	0.83 (0.38–1.80)	0.77 (0.30–1.99)
Emotional support (Yes)	81	72	0.33 (0.16–0.70) *	0.28 (0.12–0.69) *
Meeting new people (Yes)	79	63	0.64 (0.34–1.21)	0.72 (0.30–1.70)
Adult content (Yes)	69	62	0.48 (0.26–0.88) *	0.37 (0.16–0.81) *
Gambling (Yes)	19	23	0.50 (0.25–1.00) *	0.65 (0.29–1.46)

* $p < 0.05$

Before building the model, each independent variable's potential has been evaluated using Table 4's test of equality of group means. Each test shows the outcomes of a one-way ANOVA for the independent variable with the factor, Internet Users, as the grouping variable. The variable probably doesn't affect the model if the p-value is bigger than 0.05. Another indicator of a variable's potential is Wilks' lambda. Smaller numbers show that the variable is more effective at group separation. For just seven variables, including email time (in minutes), shopping time (in minutes), YouTube time (in minutes), WhatsApp time (in minutes), movie time (in minutes), download time (in minutes), and educational use time, we have found strong statistical evidence of significant differences between means of average internet users and problematic internet users (in min). The distinction between typical internet users and problematic internet users cannot be made using insignificant variables (Table 4).

Table 4: Tests whether group means of the variables under study are equivalent across different types of internet users.

Variables	Wilks Lambda	F value	p-value
Age	0.995	1.096	0.296
Family Income (INR)	0.987	2.610	0.108
Amount Spent on Internet (INR)	0.997	0.570	0.451
Email time (in min)	0.972	5.651	0.018*
Tool time (in min)	0.985	3.042	0.083
Newsgroup time (in min)	0.988	2.432	0.120
Game site time (in min)	1.000	0.006	0.938
Shopping time (in min)	0.972	5.698	0.018*
You Tube time (in min)	0.977	4.607	0.033*

Music time (in min)	0.991	1.881	0.172
Facebook time (in min)	0.993	1.430	0.233
WhatsApp time (in min)	0.952	10.099	0.002*
Twitter time (in min)	0.989	2.304	0.131
Instagram time (in min)	0.995	1.001	0.318
Snapchat time (in min)	0.990	2.043	0.155
Movie time (in min)	0.971	5.883	0.016*
Download time (in min)	0.969	6.372	0.012*
Educational use time (in min)	0.972	5.733	0.018*
Spiritual time (in min)	0.992	1.664	0.199
Adult site time (in min)	0.986	2.854	0.093

* p-value< 0.05

For choosing the "best" variables to utilise in the model, the step wise discriminant analysis method has been used. The step wise approach begins with a model devoid of any of the independent variables. The predictor with the largest F value to Enter an input value greater than 3.84 is added to the model at each stage. The final stage does not include adding any more variables because all of the variables excluded from the study have F to Enter values lower than 3.84. Therefore, family income, email usage, and WhatsApp usage are the last three variables chosen in the model with F to enter values > 3.84. The F value for a variable is a measurement of how significantly it contributes uniquely to the prediction of group membership, or how statistically significant it is in distinguishing between groups.

The following is the model's equation when the variables chosen by using step-by-step discriminant analysis are taken into account.

D = (0.000* family income) + (0.0076* email time) + (0.001*Whatsapp time) – 0.294.

By entering the values of these three variables into the discriminant equation above, we can calculate the discriminant scores. By comparing these scores to the cut-off value (Fig. 2), we can determine whether subjects will be placed in the group of average internet users or the group of problematic internet users.

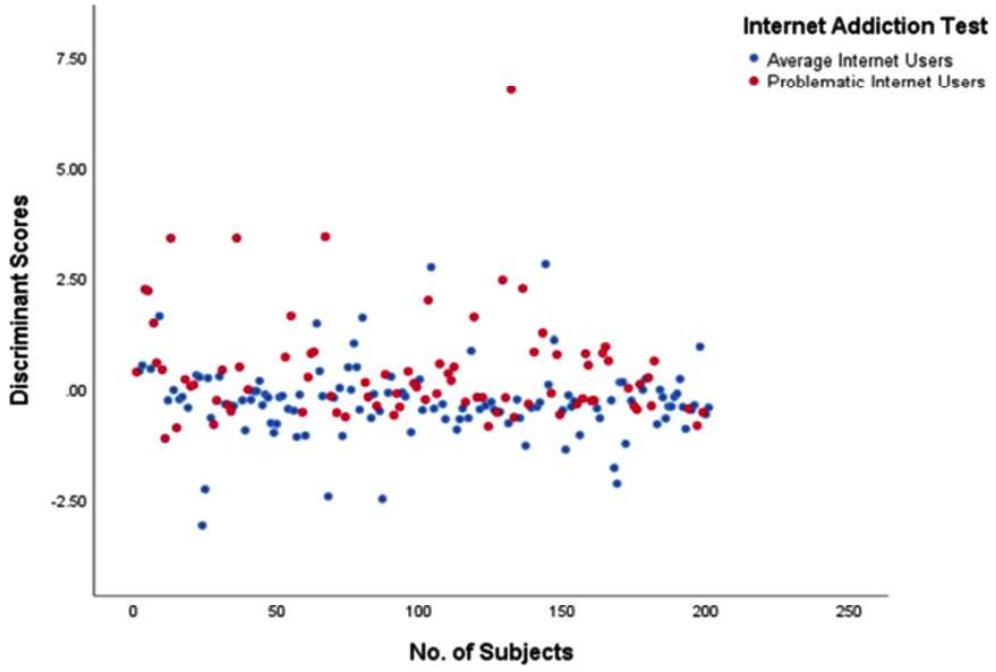

Fig. 2: R Scatter plot of discriminant scores of each subject for the model

According to Table 5, 66.2% of respondents were appropriately categorised into groups of average and problematic internet users. 92.4 percent of the participants with average internet use were properly predicted by this model.

Table 5: Shows the suggested model's classification results using a step-wise discriminant analysis model (N = 201)

Original classification	Predicted Group Membership		Total
	Average internet users(%)	Problematic internet users(%)	
Average Internet Users	109 (92.4)	9 (7.6)	118 (58.7)
Problematic Internet Users	59 (71.1)	24 (28.9)	83 (41.3)

The discriminant scores for 201 subjects are displayed in Fig. 2. While problematic internet users have a centroid value of 0.395, average internet users have one of 0.278.

The general formula for the calculation of cut off value is given by

Zcs=NAZB + NBZANA + NBZcs = NAZB + NBZANA + NB

Where,

ZCS = Optimal cut - off value between groups A and B.

NA = number of observations in group A.

NB = number of observations in group B.

ZA = Centroid for group A.

ZB = Centroid for group B.

As a result, in this instance, 0.118 will be the cutoff score. Internet users who score above 0.118 are considered problematic, whereas those who score below 0.118 are considered average.

DISCUSSION

A study on medical students by Pramanik *et al*.[9] has confirmed our findings that 41.3 percent of the subjects had PIU, although in some other studies, the PIU ranged from 5.8 to 30 percent.[3,7, 8,12,23,24,25] However, a study by Sayyah et al.[11] indicated a significant prevalence of PIU (51 percent). The demographics of the study subjects, the majority of whom (84.6 percent) belong to upper or upper middle SES, and the increased use of the internet in big cities like Hyderabad may be the causes of the high magnitude of PIU in our study. While the majority of studies revealed that male gender was strongly related with PIU,[2,3,6,7,23,25,28,29] we did not find a significant relationship between gender and PIU. However, comparable findings were reported in a study conducted by other researchers.[26,27] But according to earlier research, women were substantially more likely to have PIU.[24,30] The fact that both male and female medical students have good access to the internet may account for the lack of a statistically significant link between gender and PIU in our study. In this study, there was no correlation between staying among a hostel and PIU; similar findings were made by Salehi *et al*.[6] and Ghamari *et al*.[30], although Chaudhari *et al*.[2] and Anand *et al*.[29] reported that PIU was considerably greater in hostel dwellers than non-hostellers. The similar outcome was discovered by Chaudhari *et al*.[2], and we have not discovered any correlation between PIU and the year of study. While Sayyah *et al*.[11] discovered that PIU was significantly higher in senior students as compared to junior students, Krishnamurthy *et al*.[12] and Asiri *et al*.[31] discovered that students in their first or second professional years had significantly higher PIU as compared to third and fourth year students. Due to the fact that medical students from all professional years share similar psychological and environmental characteristics, there was no correlation between PIU and the study year in the current study. We have not discovered any conclusive correlation between PIU and age at first internet use. However, several researchers reported that PIU students had significantly lower ages at which they initially used the internet.[2, 28] While Gedam *et al*.[3] discovered PIU was significantly higher in students whose preferred time of internet access was evening or night compared to morning or afternoon, we have found no association between PIU and a preferred time of internet use. This finding is supported by a study conducted by Salehi *et al*.[6] Our study demonstrates that using the internet for emotional support, viewing adult content, gaming, and talking was a statistically significant risk factor for PIU. Previous studies by various researchers [2,7,12,23,32] have supported this finding. Similar findings were found in numerous studies conducted in India and other countries as well.[3,6,7,28] We discovered that using the internet for work or assignments, communication with friends, browsing, leisure or relaxation, wasting time, shopping, news updates, research, games, and meeting new people online were not significantly associated with PIU. Contrarily, Salehi *et al*.[6] discovered that friend to friend communication was strongly related with PIU, and Krishnamurthy *et al*.[12] discovered that using the internet for business and establishing new acquaintances on social media were significantly

connected with PIU. The usage of the internet for shopping was substantially associated with PIU, according to a study by Mazhari.[7] As far as we are aware, this study is the first to distinguish between groups of typical and problematic internet users. The model was created using a step wise Family income, email usage, and Whatsapp usage, according to DA, correctly classify 66.2 percent of the subjects into average and problematic internet user groups. One of the most widely used social networking platforms, Whatsapp is utilised excessively in daily life since it can be used to communicate text messages, videos, images, and work-related information.[33] The ease with which WhatsApp may be used people can check messages and respond at any time, from anywhere is a key element in its rapid adoption. One of the variables that has a direct correlation with internet use is income. Internet usage increases with income.[34] Medical students are increasingly using email for homework, assignments, and research related tasks. The PIU among first year medical students can be identified using these discriminators.

First, because our study was conducted in a single location, multi location studies that examine the variations in subject areas, specialties, and grade levels are recommended. Second, because our study was cross-sectional, we were unable to determine a cause and effect connection; a longitudinal study would have provided more useful information. Third, there is some recollection bias in this study. Fourth, using a person's self-report to estimate how much time they spend on various gadgets and activities is probably skewed.

CONCLUSION

According to our study, undergraduate medical students have significant PIU. Chatting, watching pornographic content online, and using the internet for emotional support were all strongly linked to PIU. The foundation course of the curriculum implementation support programme (CISP) for MBBS students might include a lesson on PIU and its potential drawbacks to raise awareness among medical students. It should be made a priority to offer kids plenty of chances to participate in extracurricular activities and socialise with peers. Due to their heavy workloads from coursework and lengthy posting schedules, medical students should have access to counsellors for emotional and mental assistance.

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Original Article

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Pattern and Prevalence of Psychiatric Disorders among Patients Attending a Tertiary Care Centre: A Cross-sectional Study

Ambika S Kabade[1], Narayan R Mutalik[2]

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Abstract

Background: Patients, their families, and society frequently fail to notice and take care of those with mental health problems. Epidemiological research over the past ten years has revealed that mental diseases are widespread around the world and are linked to severe functional impairment.

Aims: To estimate the prevalence and pattern of psychiatric disorders among patients attending a Tertiary care centre in Bagalkot.

Materials and Methods: This cross-sectional study was carried out from January to March of 2022. Details of 512 consecutive subjects in total were gathered. The cases were classified using ICD-10 diagnostic criteria (international classification of diseases). The SPSS trial version was used to examine the data after it was entered using MS Excel. Quantitative data were analysed using frequency, percentage, and proportion.

Results: The study included 512 subjects, who attended psychiatry OPD. The sociodemographic details (Age, sex, Residence) of the patients were collected from old records. The mean age of the study sample is 37.10± 14.6 years. The majority of subjects were males (n=285, 56%), New cases (n=185, 36.13%). Regarding habitat, maximum patients (n= 303, 59%) came from rural area. The most prevalent disorders were Anxiety and stress-related disorders (n= 154, 30.1%), Affective (n= 140, 27.3%).

Conclusion: The results of this survey showed that anxiety and stress related disorders were the most common condition, followed by depression. To take the early and necessary steps for better care, accurate and relevant statistics of the pattern of psychiatric disorders are required. We anticipate that the findings of this study will be useful in developing a strategy for improving mental health services in tertiary care facilities.

Keywords: Common mental disorders; Anxiety disorders; Depression; Substance use disorders; Systematic review, Prevalence.

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INTRODUCTION

A complete state of physical, mental, and social well-being is a health condition. Psychiatric conditions are a top public health concern. Four psychiatric disorders are among the top ten health problems that affect the Disability Adjusted Life Years (DALYs).[1] Patients, their families, and society frequently ignore and undervalue mental health issues.[2] Epidemiological research conducted over the past ten years has demonstrated that mental

problems are widespread around the world and are linked to severe functional impairment.[3] According to a survey, 1 in 4 persons worldwide experiences mental problems each year. 450 million people worldwide suffer from various mental illnesses now a days.[4] Psychiatric diagnoses may be assigned hierarchically.[5] According to Foulds and Bedford (1975), there are non-reciprocal inclusive links between the four groups of functional disorders they defined. Sensorium abnormalities, such as memory loss and disorientation, are thought to take precedence over all other conditions. The most significant symptoms of schizophrenia are the first-rank ones if these abnormalities are absent (in London, at least).[6] Despite attempts by the 1982 National Mental Health Programme and its district level component, the District Mental Health Programme (DMHP), to increase mental health care coverage, very few people in India who need it receive treatment.[7] Finding out the pattern of psychiatric morbidity among the patients visiting the psychiatry outpatient department was the study's main goal.

AIM

To estimate the prevalence and pattern of psychiatric disorders among patients attending a Tertiary care centre in Bagalkot.

MATERIALS AND METHODS

The present study is a cross-sectional study done in outpatient psychiatry department of HSK Hospital, Tertiary Health Care Centre Bagalkot in the State of Karnataka. Ethical clearance was obtained from the institutional ethics committee. The study was conducted over 3 months (January 2022 – March 2022). A total consecutive 512 subjects' details were collected. International classification of diseases – 10 Classification of Mental and Behavioural Disorders (ICD – 10) was used for the diagnosis of subjects.

STATISTICAL ANALYSIS

Data was entered using MS Excel and analyzed usingthe SPSS trial version, Quantitative data wereanalyzed using frequency percentage and proportion.

RESULTS

The study included 512 subjects, who attended psychiatry OPD. The sociodemographic details (Age, sex, Residence) of the patients were collected from old records. The mean age of the study sample is 37.10± 14.6 years. The majority of subjects were males (n=285, 56%), New cases(n=185, 36.13%). Regarding habitat, maximum patients (n= 303, 59%) came from rural area (Table 1. The most prevalent disorders were Anxiety , stress-related and somatoform disorders (n= 154, 30.1%), and Affective (n= 140, 27.3%) (Table 2). It was found that 13% 0f patients had Drug and alcohol use disorder, 21% had a psychotic disorder, 3% had an organic mental disorder, 3.51% had behavioural syndromes, 0.71% had Mental retardation, 0.19% had a disorder of psychological development, 0.19% had come for fitness certificate, and 1.17% required diagnostic clarification (Fig. 1).

Table 1: Distribution of Respondents According socio Demographic Variables

Variable		Frequency (N = 512)	Percentages
Gender	Male	285	55.66
	Female	227	44.33
Age	1.<12	4	0.78
	2.12-18	27	5.27
	3.19-24	61	11.91
	4.25-44	280	54.68
	5.45-60	95	18.55
	6.>61-75	45	8.78
Residence	Rural	303	59.17
	Urban	209	40.82
Cases	New	185	36.13
	Old (Follow-up)	327	63.86

Table 2: Prevalence of mental disorders

Diagnosis	Frequency	Percentage
1. Organic mental disorders	14	2.73
2. Psychoactive substance use	66	12.89
3. Schizophrenia and delusional disorders	108	21.09
4. Mood disorders	140	27.34
5. Anxiety, stress-related and somatoform disorders	154	30.07
6. Behavioural disturbances	18	3.51
7. Mental Retardation	4	0.78125
8. Disorder of psychological development	1	0.195313
9. Fitness Certificate	1	0.195313
10. Diagnostic Clarification	6	1.171875

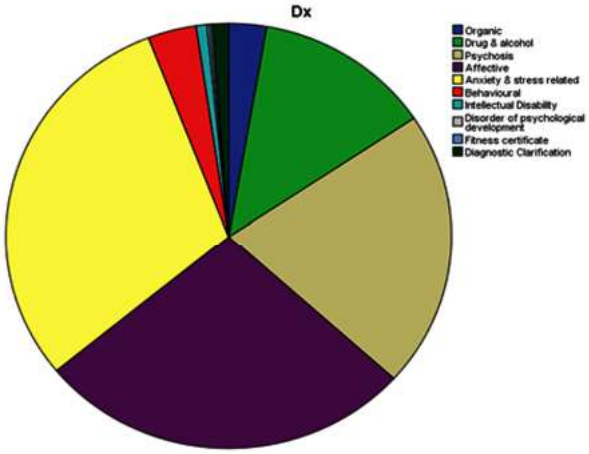

Fig. 1: Prevalence of mental disorders

DISCUSSION

The bulk of the subjects in our study was male and came from rural areas. Anxiety and stress related disorders and affective disorder were the two most common disorders. According to age distribution, the majority of patients were between the ages of 25 and 44 years (54.68 %) and 45 and 60 years (18.55 %). Patients under the age of 12 and those older than 76 were few, which is consistent with our understanding of the time between sickness start and the mortality rate for mentally ill people.

According to a study by Md. Sultan et al, major depressive disorder (38.6% of respondents) and anxiety disorders were the two most prevalent psychiatric morbidities (25.8%).[8] Depression, however, was the second most common disorder in our study. Given the higher prevalence of depression and anxiety disorders in women compared to men, it is evident at the population level that they are more disabled as a result of mental diseases[9], however, we did not assess the distribution among men and women. One justification is that somatic complaints (83%) rather than psychological issues are more common in people with an anxiety disorder (17%).[10,11] It may be possible to enhance patient quality of life and reduce misuse of medical services through improved diagnosis and treatment of anxiety disorders in primary care. The most effective use of screening is in conjunction with definite evaluation, support, therapy, and follow-up.

This study offers data on the prevalence of psychiatric illness among patients visiting tertiary care facilities despite several limitations. The investigation was carried out in a medical college hospital that was carefully chosen. The study's limitations include its relatively small sample size, convenient sampling method, and the possibility that the study population may not accurately reflect the entire community.

CONCLUSION

"The results of this survey showed that anxiety and stress-related disorders were the most common condition, followed by depression." To take the early and necessary steps for better care, accurate and relevant statistics of the pattern of psychiatric disorders are required. We anticipate that the findings of this study will be useful in developing a strategy for improving mental health services in tertiary care facilities.

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DECLARATION OF INTEREST

The authors state that there are no conflicts of interest that would compromise the objectivity of the research.

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Original Article

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Unremitting Schizophrenia: A Study of Functioning of a Family and Social Support at Tertiary Centres, Telangana

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Abstract

The family is a fundamental unit that is responsible for maintaining the integrity of the individuals who make up the unit. Families provide emotional, social, and financial assistance to its members. A high functioning family assists its members in maintaining communication, emotional, and behavioral control, as well as problem solving and coping practices. A serious and chronic illness like schizophrenia puts a financial and emotional strain on the caregivers.

Aims and Objectives: The aim of this study was to determine whether patients with unremitting schizophrenia and their primary caregivers had different perspectives on family functioning and social support, and whether social support is linked to healthy functioning of the family.

Materials and Methods: A questionnaire-based, cross-sectional study. Fifty unremitting schizophrenics diagnosed by diagnostic and statistical manual (DSM)-5 criteria and their family members were interviewed. The family assessment device (FAD) was used to assess family functioning, and the multidimensional scale of perceived social support (MSPSS) was used to assess social support. Research was conducted at psychiatric outpatient department (OPD) of a tertiary care hospitals.

Results: Schizophrenic patients had more difficulty on problem solving as compared to their relatives, while no prominent differences were seen on the other dimensions of FAD in the two groups. Furthermore, schizophrenics saw friends as providing more social assistance than their family. All aspects of family functioning were linked to the Family support in schizophrenia patients.

Keywords: Family functioning; Schizophrenia; Social support; MSPSS; FAD.

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INTRODUCTION

The family is the fundamental unit responsible for maintaining the integrity of the individuals who make up the unit. Families assist their children emotionally, socially, and financially members. A well functioning family contributes to long term stability such as communicative, emotional, and behavioral dimensions. It also aids in problem solving and coping. A serious and disabling illness like schizophrenia has emotional and economic consequences. The function of the family in the progression of schizophrenia has received more

attention in the last three decades. The familial environment has been identified as a contributing element in the patient's relapse or rehabilitation.[1,2]

This paved the way for the idea of expressed emotions (EE), which refers to family members' attitudes toward the patient and has far reaching consequences for the disorder's course and prognosis.[3] As a result, family treatments have been developed in order to reduce the detrimental effects of caregivers on the patient's rehabilitation and recovery.[4,5]

A thorough and sympathetic understanding of family members on numerous aspects would help in determining the family's behavioral patterns and developing better therapy strategies.

As a result, rather than focusing on a single EE feature, families should be examined on the numerous dimensions proposed by the McMaster model of family functioning to get a more holistic picture.[6] Several studies have been conducted in India on the impact of schizophrenia on families and social support, but there is a paucity of literature on the various elements of family functioning as defined by the McMaster model.

Schizophrenics have a variety of needs, including social support, welfare benefits, illness education, and psychiatric distress. In addition, their relationships and careers are deteriorating, resulting in increased isolation and a loss of social support.[4] A patient's support system may include friends, residential or daycare providers, shelter operators, roommates, and others in addition to family. It's important to figure out where the patient gets his or her social support and this will ensure that the right kind of social support, encouragement, and treatment is provided. According to a research, family with a schizophrenia patient experiences decrease in social network and relations, which increases the family's vulnerability to stressors due to a lack of social support.[7]

The Indian patient has the advantage of being raised in a home that values social support, Because the majority of families are joint or nuclear, the primary support bears a lower load of emotional, social, and economic considerations.[8,9]

In psychiatric treatment, family functioning and social support are key elements. Due to their disorders, psychiatric patients' perceptions of their families may be distorted. Hence, it's critical to understand their perspectives on family functioning because it affects clinical outcomes.[10,11] It's also crucial to understand how each family member views family functioning, as studies have revealed a gap between patients' and their family members' perspectives of family functioning.[10,12,13]

AIM

The aim of this study was to determine whether schizophrenic patients and their primary caregivers had different perspectives on family functioning and social support, and whether social support is linked to healthy family functioning.

MATERIAL AND METHODS

Study Design And Sample

This study was approved by the institutional ethics committee. It was conducted in the psychiatric outpatient departments (OPD) of a mamata general hospital Khammam and Mamata Academy of Medical Sciences, Hyderabad. Patients and their relatives who visited the psychiatric outpatient department between January and April 2022 were given a description of the study and its implications, as well as signed informed consent to participate in the study. To collect information on demographic factors, length of disease, and treatment taking behavior, a semi structured proforma is used to collect socio demographic profile.

All patients who were clinically diagnosed as schizophrenia were selected for this study. This study includes 18 years of age and above participants who had follow up greater than 6 months. Patients who are acutely disturbed and unable to communicate were excluded. A systematic random sampling technique was employed for the selection of the study.

INSTRUMENT

Family Assessment Device

The FAD is a standardized family functioning assessment tool. Epstein (1983) devised a 60 items self reporting questionnaire based on the McMaster model of family functioning. The FAD assigns total score as well as seven subscales. Each FAD item (including reverse items) is graded on a four point scale, with higher scores indicating poorer or worse family functioning.

Assessment of Social Support

The MSPSS (Multidimensional scale of perceived social support), designed by G. D. Zimet, was

used to assess the individual's perception of social support.[17] It's a 12 items survey that assesses social support from family, friends, and significant others, as well as how each of these sources is perceived by respondents.

Statistical Analysis

For comparison of FAD and MSPSS mean scores between patients and their family members, T test was used to examine group differences.

The direction and amplitude of the relationship between several characteristics of FAD and social support from family were determined using Pearson's correlation coefficient. SPSS 11 for Windows was used to conduct all statistical analyses, with a significant level of P<0.05.

RESULTS

Characteristics of the Sample

The average age of the patient group was 32 ±12.61 years, according to the demographic structure of the sample. A total of 35 males (70%) and 15 women (30%) participated in the study. Thirty-five percent (70%) had completed secondary or higher education, whereas five percent (10%) were illiterates. Twenty-three of the participants (46%) were single, and 21 (43%) were unemployed. A total of forty patients (80%) remained in a nuclear family. The sickness could last anywhere from one year to twenty years. The average sickness lasted 4.28 years.

The relative group's average age was 39 ± 12.37 years. Women made up 68 percent of the total, while men made up 16 percent. Parents or spouses were the majority of primary caregivers. Twenty four (48%) were illiterates, while 21 (42%) had completed secondary or higher education. Only eight (16%) were single and forty (80%) were married. Twenty-four of them were employed (48 percent), while the remainders were unemployed. The majority of the participants (94%) were Hindu's.

COMPARISON OF FAMILY ASSESSMENT DEVICE SCORES

The FAD mean scores of patients and their family members are shown in Table 1. There was a significant difference in problem solving between the two groups, with schizophrenia patients having greater difficulties than their relatives. However, there was no statistically significant change in the other FAD dimensions.

Table 1: Family Assessment Device

Fad Subscales	Patient Group		Relatives Group		T Test	P Value
	Mean	Sd	Mean	Sd		
Roles	30.2	4.6	28.81	3.462	1.7072	0.0909
Problem Solving	13.9	3.3	12.24	2.51	2.831	0.0056**
Communication	22.5	3.34	21.11	4.98	1.6391	0.1044
Affective Involvement	13.7	2.94	13.5	13.5	0.1024	0.9187
Behaviour Control	23.8	2.35	23.68	22.89	0.036	0.9707
Affective Responsiveness	13.5	2.7	13.9	2.8	0.727	0.468
General Functioning	29	4.49	28.6	28.6	0.097	0.922

P<0.05;P<0.01*

Comparison of Perceived social Support Scores on a Multidimensional Scale

Table 2 shows the MSPSS mean scores of patients and their family members. The schizophrenia patients perceived their friends as providing more social support than their family, which was a significant difference. In terms of how both groups viewed social assistance from family and significant others, there was no significant difference.

Table 2: Social Support by Mspss

Mspss Subscales	Patient Group		Relatives Group		T Test	P Value
	Mean	Sd	Mean	Sd		
Support From Family	12.2	5.68	11.2	4.16	1.0043	0.3177
Support From Friends	29.1	9.2	25.1	9.1	2.1858	0.0312**
Support From Significant Others	2.96	1.22	2.7	1.2	1.074	0.2853

*P<0.05; MSPSS: multidimensional scale of perceived social support

FAD scores and social support of patients. Table 3 shows the Pearson's correlation coefficient (r) between FAD scores and MSPSS ratings for social support from patients' family. In the schizophrenia group, perceived family social support was linked to all dimensions of family functioning.

Table 3: Correlation between Family Assessment Device and Social Support Subscales of Schizophrenic group

Fad	Mspss Social Support From Friends	
	r	p
Roles	-0.3446	0.01
Problem Solving	0.34	0.013
Communication	-0.29	0.03
Affective Involvement	-0.29	0.03
Behavior Control	-0.37	0.006
Affective Responsiveness	-0.47	0.002
General Functioning	-0.38	0.0006

*P<0.05; MSPSS: Multidimensional scale of perceived social support

There were highly significant associations between behavior control, affective responsiveness, and general functioning. Thus supporting the idea that, regardless of the severity of schizophrenia, if the family's social support is higher, the family will operate better.

DISCUSSION

The caregivers were mostly mothers or wives of the patients, while the patient sample was mostly male. In comparison to their illiterate caretakers, the majority of the schizophrenics had secondary education or higher. Only five schizophrenia patients (10%) were determined to be illiterates, indicating that they had completed their education.

This study looked on the family functioning of unrelenting schizophrenics and compared it to the caretakers. When compared to their relatives, schizophrenics were found to have a lower problem solving ability. Koyama et al. observed similar results.[13] In patients with schizophrenia, Addington et al. discovered a link between neurocognitive performance and interpersonal problem solving abilities.[18]

Psychotic patients' cognitive deficiencies may also contribute to an unfavorable assessment of their family's problem-solving abilities. In comparison to their caretakers, the schizophrenic group perceived a decreased ability of the family to perform behavior's to satisfy the instrumental and affective needs of other family members (roles), transmit clear and directive verbal messages (communication), show interest and care for one another (affective involvement), and maintain the standard of discipline. In affective reactions of appropriate quality, however, the caregivers observed more dysfunction than the patients; however this result only missed the significance test. Schizophrenics have difficulties with family functioning as a result of their illness, as the patient's view of family functioning could reflect the characteristics of their disorders. According to studies, family functioning differs depending on whether the patient has schizophrenia, depression, or bipolar illness.[13]

There were no significant variations in the level of perceived social support obtained from family or significant others in both groups. In comparison to their caregivers, schizophrenia patients perceived more support from their friends. This could be related to the social structure, in which neighbors and family friends become nearly family members as a result of greater social connections during cultural activities and celebrations. To preserve its proper functioning, the family burdened by mental illness needs emotional, financial, and instrumental help. Researchers have discovered that families with schizophrenic members are more likely to experience network contraction and condensation, as well as dissatisfaction with the social support they receive.[1,7]

In contrast to the findings above, the patients in our study found more support from their friends despite their condition.

In schizophrenics, social support was also found to be substantially connected with family functioning. All aspects of family functioning are significantly linked to social assistance supplied by relatives. The findings of our investigation agree with those of Yu- Kit Sun and Cheung.[19] As a result, increasing family functioning would entail the creation of

informal supportive networks for families as well as the expansion of natural social networks. Support and extensive family intervention are required for the patients and their families.

A supportive style of multiple family group therapy is another intervention option.[20] In India; social support is an important element of the culture, as family, friends, and others frequently offer emotional and financial support during times of crisis or illness. People in India have a strong sense of community and typically come together in times of distress. As a result, there should be little difference in how patients and caregivers perceive social support. A disease like schizophrenia, on the other hand, is bound to affect the family, causing emotional and financial strain, and as a result, the primary support group may experience burnout while dealing with their schizophrenia symptoms. All of this would affect the level of social support provided as well as other aspects of family functioning.

CONCLUSIONS

Except for problem solving, the perspectives of schizophrenic patients and their family members were nearly identical in this study. The schizophrenia patients valued social support from friends more and all aspects of family functioning were related to social support from family in the patient group. This demonstrates the importance of assessing family functioning as viewed by schizophrenic patients, as a schizophrenic patient's perceptions of his or her family environment frequently predict relapse and/or re-hospitalization.[10]

Some limitations exist in the study. The convenient sampling was done and sample size was small. A comparison of caretakers' parents and spouses would also shed light on the disparity in perceptions between family members and the patient population. Larger, more controlled research would undoubtedly provide more light on the difficulties raised above.

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Original Article

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Depression and Anxiety Prevalence, Quality of Life and its Consideration among Psoriasispatients: A Cross-sectional Study

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Abstract

Mental and neurological disorders account for 10% of Disability Adjusted Life Years lost (DALY). people suffering from recurrent and progressive medical conditions have a higher risk of developing mental health problems. Psoriasis is one such disease where psychiatric comorbidities are more prominent and common and have a negative impact on mental health leading to a poorer prognosis.

Aim and objectives: This study was conducted to determine the incidence of anxiety and depression in psoriasis patients, as well as to correlate these with psoriasis severity and quality of life.

Materials and Methods: This study was done at a tertiary care hospital at Mamata General Hospital Khammam and Mamata Academy of Medical Sciences, Hyderabad over a period of 3 months on psoriasis patients. Psoriasis Area and Severity Index were used to assess the severity of psoriasis. PHQ-9, Perceived stress scale, and GAD -7 were used for screening depression, perceived stress, and anxiety respectively. WHOQOL-BREF was used to assess the quality of life.

Statistical Analysis: Statistical Analysis was performed using Microsoft excel software and SPSS .

Results: A sum of 69 subjects had anxiety and 71 subjects had depression. 51 patients had significant stress. A remarkable positive correlation was established between psoriasis variables like severity and duration of psoriasis and psychological variables such as stress, anxiety, and depression. The severity of psoriasis had a significant negative relation to social relationships and environmental domains of WHOQOL. QoL was significantly poor in patients with psoriasis with existing comorbidities like anxiety or depression.

Conclusion: Patients suffering from psoriasis have a significant rate of depression, anxiety, and stress. This study signifies the relationship between psoriasis, Quality of life, and psychiatric comorbidities and the need to consider dermatological and psychological factors.

Keywords: Depression; Anxiety; Psoriasis; QOL.

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INTRODUCTION

Mental and neurological disorders account for ten percent of all disease related Disability Adjusted Life Years lost.[1] People with recurrent or progressive medical conditions have a higher risk of developing mental health problems, according to research.[2] Psoriasis is a psychocutaneous skin disease that affects nearly 1.4 - 2 percent of the global population, with men and women in equal proportion.[3] Many studies conducted around the

world have found that psychiatric comorbidities are common among psoriasis patients.[4-8] Psoriatic illness has a negative impact on a patient's physical and mental well-being, which, when combined with overlapping pathophysiology, raises the chance of clinically severe psychiatric problems. These mental illnesses, in turn, have an impact on thepatient's outlook and, perhaps, prognosis. Maladaptive cognitive and affective behaviors have been found, as well as mechanisms linking anxiety, depression, and inflammation in psoriasis. Psychotherapy, such as cognitive behavioral therapy, has been studied and found to be linked to reduced disability, stress, and, most notably, psoriasis physical severity.

AIMS AND OBJECTIVES

This study aimed to measure the prevalence of anxiety and depression and levels of perceived stress in patients with psoriasis attending a Tertiary Care Hospital in Khammam and Hyderabad, India. An attempt was also made to study the correlations between psychological variables (depression, anxiety, and perceived stress), the severity of psoriasis, and quality of life.

MATERIALS AND METHODS

This is a multicentered cross-sectional study. It was conducted for 3 months from February 10, 2022, to May 10, 2022, by the Department of Psychiatry and Dermatology at a tertiary hospital in Khammam and Mamata Academy of Medical Sciences, Hyderabad. The study included all individuals aged 18 to 64 years who registered at the Department of Dermatology and were diagnosed with psoriasis. The study excluded patients with concomitant skin diseases and pre-diagnosed chronic medical illnesses. The consultant dermatologist used the Psoriasis Area and Severity Index (PASI)[9] to assess the severity of psoriasis. A brief clinical interview was conducted. patients with psychotic symptoms, cognitive impairment disability, substance abuse issues, and a history of Prior diagnoses of mental illness were ruled out. Patients who were eligible for participation in the study were given a summary of the research topic and given their informed consent. A sum of 120 people has selected out of which 90 patients met the eligibility requirements. Information about the socio demographic and clinical characteristics was recorded using a structured proforma. The PHQ-9[10], GAD-7[11], perceived stress scale (PSS)[12], and WHOQOL-BREF[13] were used to screen all subjects for depression, anxiety, perceived stress, and Quality of life.

All of the analyses were carried out with the help of Microsoft Excel and the Statistical Package for Social Sciences (SPSS for Windows, Version 16.0). SPSS Inc., Chicago.

RESULTS

The average age of the participants in the study was 41.91 years. Most of the participants were between the ages of 31 and 40. 69 (76.7 percent) of the 90 patients were from the lower middle socioeconomic class, while 60 (66.7 percent) were from rural areas. Males made up the majority (56.7 percent) and were married (87.8 percent).

In the sum of 90 patients with psoriasis of 71 patients (78.9%) experienced significant depression. The prevalence of anxiety was 76.7 percent, with 69 patients testing positive. There were 51 patients who were regarded to be under significant stress. Twenty of the patients had a score of 20 or higher, suggesting significant stress.

24 patients (16.6%) reported that their QOL was "poor" - "very poor" and 35 (35.6%) patients stated "neither poor nor good." In response to "How satisfied are you with your health?" 26 (28.9) patients reported "poor" - "very poor" and 33 (36.7%) reported "neither poor nor good."

Table 1: Patients with psoriasis (N = 90): distribution of socio demographic variables

Variables	Categories	No. of patients n (%)
Age in years	20 and below	7(7.8%)
	21- 30	7(7.8%)
	31-40	25(27.8%)
	41-50	24(26.7%)
	51-60	24(26.7%)
	Above 60	3(3.3%)
Gender	Male	51(56.7%)
	Female	39(43.3%)

Marital status	single	11(12.2%)
	Married	79(87.8%)
Area of domicile	Rural	60(66.7%)
	Urban	30(33.3%)
Socio-economic class	Upper	0
	Upper middle	7(7.8%)
	Lower middle	69(76.7%)
	Upper lower	12(13.3)
	Lower	2(2.2%)

The relationship between socio demographic factors and psychiatric morbidity, psoriasis clinical characteristics, and quality of life

Patients with psoriasis who lived in rural locations had significantly greater rates of depression. Rural patients had a 3.28-fold increased risk of depression. However, only 5.6 percent to 8.6 percent of the variance in depression scores was explained by an area of domicile (AD). The PSS score increases by a tiny amount as the person gets older. Age, on the other hand, is a weak predictor, accounting for only 5% of the variation in PSS. Any socio-demographic category did not predict anxiety, psoriasis severity, or quality of life.

Psoriasis severity and psychiatric morbidity

Total PASI score (severity of psoriasis) had a significant positive correlation with total depression score (r = 0.465, P = 0.000), anxiety score (r = 0.515, P = 0.000) and perceived stress score (r = 0.544, P = 0.000). Patients of psoriasis with anxiety and depression had a significantly higher score on PASI in contrast to patients without anxiety and depression. The predictive relationship between severity of psoriasis (PASI) and absolute scores of depression (PHQ-9), anxiety (GAD), and PSS was statistically significant. Psoriasis severity and depression may be linked to approximately 22% of the variance in each prediction. The Psoriasis severity has a predictive association with the highest level of anxiety (30 percent variance prediction). For patients, the cumulative probability was greater. Higher PASI scores indicate a more serious grading of depression/anxiety.

Table 2: Association between psychiatric morbidity, Clinical variables of psoriasis and QOL

-	-	PHQ9 total score	GAD7 total score	PSS	PASI	Psoriasis duration
PHQ 9 Total score	r	---	.919**	.854**	.465**	.382**
	p	---	.000	.000	.000	.000
GAD7 Total score	r	.999**	--	.872**	.515**	.309**
	p	.000	--	.000	.000	.003
PSS	r	.854**	.872**	--	.544**	.305**
	p	.000	.000	--	.000	.003
PASI	r	0.465**	.515**	.544**	--	.198
	p	.000	.000	.000	--	.061
Psoriasis duration	r	.382	.309	.305	.198	--
	p	.000	.000	.003	.061	--
WHO QOL Physical domain	r	-.031	.045	.249	.145	-.167
	p	.774	.677	.018	.173	.116
WHO QOL Psychological domain	r	.019	.032	.212	.018	-.162
	p	.858	.762	.044	.868	.127
WHO QOL Social domain	r	-.285	-.208	-.084	.032	-.223
	p	.006	.049	.433	.764	.035
WHO QOL Environmental domain	r	-.355	-.269	-.152	-.067	-.142
	p	.001	.010	.153	.530	.183

Psoriasis duration and psychiatric morbidity

The overall length of psoriasis had a positive connection with total depression score (r = 0.382, P = 0.000), anxiety (r = 0.309, P = 0.000), and perceived stress (r = 0.305, P = 0.000) scores. There was a statistically significant connection between the duration of psoriasis and the absolute scores of depression (PHQ-9), anxiety (GAD), and PSS. Patients with psoriasis for a longer period of time were more likely to have a severe form of depression or anxiety.

The severity of psoriasis and psychiatric morbidity in association with quality of life

Psoriasis severity was found to have a significant negative connection with two WHOQOL domains: social interactions (r = 0.285, P = 0.006) and environmental domain (r = 0.208, P = 0.049). Patients with psoriasis who also had anxiety or depression had a considerably higher proportion of patients expressing poor to very bad quality of life. Similarly, a considerably larger proportion of psoriasis patients with anxiety and depression reported low to very poor health satisfaction.

Table 3: Distribution of responses of patients to WHO QOL

Variables	Groups	Distribution of responses of patients to WHO QOL					Pearson chi-square	df	p
		Very poor	Poor	Neither poor nor good	Good	Very good			
WHOQOL	Psoriasis with anxiety/depression	12	12	30	11	9	26.715	4	.000
Question 1	Psoriasis without anxiety/depression	0	0	2	12	2			
WHOQOL	Psoriasis with anxiety/depression	16	10	30	11	7	21.141	4	.000
Question 2	Psoriasis without anxiety/depression	0	0	3	10	3			

$p < 0.05$ = Statistical significance

DISCUSSION

The prevalence and implications of psychiatric morbidity among psoriasis patients attending a Tertiary Care Centers were investigated in this study. We also looked at the impact of socio demographic and clinical factors on the mental health of psoriasis patients. The patients were additionally assessed for perceived stress was the study's greatest strength.

Psychiatric Morbidities in Psoriatic Patients

In our study, patients with psoriasis had an overall frequency of depression of 78.9 percent, with 62.2 percent having mild to moderate severe depression that would necessitate psychiatric intervention. Various research on psoriasis patients has found an incidence of depression ranging from 28% to 67 percent.[8,14-18] The prevalence of depression in psoriasis patients observed in our study is higher than in most of the other studies evaluated. To some extent, these variances could be explained by heterogeneity in the screening procedures used between investigations.

In our study, the overall prevalence of anxiety disorders among psoriasis patients was 76.7 percent. Severe anxiety requiring psychiatric assistance was seen in 22.2 percent of people. This is partially consistent with the findings of other studies examined here.[19-20] The high incidence of anxiety can be explained by the fact that patients visiting the dermatological clinic are concerned about their condition, the duration and outcome of therapy, the fear of investigations, and the financial elements of treatment. Several studies have also found that psoriasis patients had both depression and anxiety disorders.[6,14,21,22] According to our findings, 65 (72.2 percent) of patients tested positive for both depression and anxiety at the same time, which is consistent with earlier research. In other words, patients with psoriasis who have a depressive disorder are prone to experience anxiety symptoms as well.

In our study, the mean PSS score in psoriasis patients was 14.71. Fifty-one patients (56.7 percent) had a substantial stress score, and twenty patients (22.2 percent) had a score of 20 indicating severe degrees of perceived stress. These prevalence estimates are consistent with earlier research findings.[5,16,23-25]

QOL IN PSORIASIS PATIENTS

According to our findings, 24 (16.6 percent) of the 90 patients studied claimed that their quality of life was bad to very poor. Twenty six (28.9) patients rated "poor" to "extremely poor" health satisfaction. We discovered a negative interrelationship between psychiatric morbidity and two WHOQOL domains: social relationship and environmental domain. Thus, psoriasis patients' worse social and environmental quality of life is connected with higher psychological discomfort.

The impact of socio demographic characteristics on the prevalence of psychiatric morbidity

Patients in their third to fifth decades of life made up the majority of the study sample, with a higher proportion of male subjects. Males in their third to fifth decades of life are economically productive members of society. As a result, they are more prone to seek immediate treatment. Most of the Indian research has found a similar gender disparity in psoriasis distribution. Males have a higher prevalence of psoriasis, with the majority of individuals presenting in their third or fourth decade of life.[26-29]

Socio demographic characteristics have consistently been found to be the least useful in predicting psychiatric morbidity in psoriasis patients.[4,19] Only two sociodemographic variables were shown to have a weak connection with psychiatric morbidity: age and stress, and AD with depression.

Age had no significant relationship with anxiety and sadness in this study. The PSS score grows with age, although only by a very modest amount. Sampogna et al.[30] discovered a similar finding which states psychological distress was higher in older psoriasis patients.

We discovered that the prevalence of depression was substantially higher among psoriasis patients from rural areas. These findings can be explained by the fact that patients from rural areas typically have a poorer economic position, ongoing financial problems, lesser education, issues with basic necessities, and limited access to health care. As a result, these individuals are more likely to have poor adherence to therapy and regular follow-ups, worsening the severity of their psoriasis. However, because the majority of our individuals were from rural areas, this observation should be regarded with caution.

Clinical factors' effects on the prevalence of psychiatric morbidity

This study discovered a link between the intensity and duration of psoriasis and depression/anxiety/stress which was similar to other studies.[14,15,23,31-33] Patients with severe psoriasis have a higher rate of psychiatric illness. Our research also found that patients with higher PASI scores are more likely to suffer from severe depression/anxiety. Similarly, people with psoriasis over a longer period of time were more likely to develop severe depression/anxiety.

The majority of studies have found a link between the severity of psoriasis and anxiety/depression.[14,15,17,24,23] Devrimci Ozguven et al.,[15] Akay et al.,[14] and de Korte et al.[33] discovered a link between the severity of psoriasis and psychiatric illness. As a result, our findings are consistent with past research. However, our findings contradict the findings of Fortune et al.,[31] who claimed that the severity of psoriasis has no effect on the magnitude of anxiety and depression.

Another area of study has been the association between the length of psoriasis and depression/anxiety. Fried et al.[32] and Esposito et al.[34] discovered a link between the severity of anxiety/depression and the duration of psoriasis. Our research found a link between psoriasis severity and duration and psychological suffering (PSS score). Psychological stress has been linked to the onset or exacerbation of psoriasis.[35] As revealed in our study, most researchers have discovered high levels of stress among psoriasis patients.[6,31,32]

CONCLUSION

According to the studyanxiety,stress and depression are much higher among psoriasis sufferers. Patients with psychiatric comorbidities had significantly low quality of life. We discovered a complex link between psoriasis, psychiatric comorbidity, and quality of life, as well as the necessity for an integrated strategy for disease care. Routine screening for psychiatric comorbidities in all psoriasis patients is required, as early diagnosis of these comorbidities is the first step in effective care. According to research, psychosocial therapies improve clinical outcomes in psoriasis patients. This must be proved in the socio-cultural context of India. This would make it easier to combine psychiatric and dermatological care. This would eventually contribute to better overall health outcomes and quality of life.

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Original Article

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Choosing Psychiatry as a Speciality: Attitude of Medical Students

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Abstract

Context: Both the field of psychiatry and mental disorders are stigmatized heavily. Even doctors are susceptible to the stigma that still exists. Psychiatrists are thought to be less respectable, less prestigious, less recognized, and have a less scientific approach.

Aims: The goal of the current study was to determine how medical students felt about the specialty of psychiatry after being exposed to medical education for a variety of lengths of time.

Settings and Design: The study was carried out in Telangana at a private medical school. Two groups of participants, undergraduates and house surgeons, were formed from the total number of participants. A cross-sectional descriptive study was conducted.

Materials and Methods: The house surgeons and second year students were given socio-demographic and attitude toward psychiatry 30 items questionnaires, and the results were evaluated using the proper statistical methods.

Statistical Analysis Used: Student's t-test and Chi-square test using SPSS version 21.

Results: 52% of house surgeons and almost 84% of second year medical students (P = 0.001) had favourable attitudes of psychiatry. Only five second years (5%) and two house surgeons (1.8%) said they would like to pursue psychiatry as a career, while 73% said they would not like to specialise in the field.

Conclusions: Compared to the house surgeon group, second year medical students displayed a more positive attitude. Increased negativity in upper level classes may be a result of subpar psychiatric instruction during undergraduate training, as well as offensive statements and stereotypes made by medical educators and practitioners from other specialised streams.

Keywords: Attitude; Psychiatric hospital; Psychiatric illness; Psychiatrist, Stigma.

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INTRODUCTION

Stigma is viewed as the existence of an abhorrent or undesirable circumstance for a person or group of people. It involves other community members making disparaging remarks about someone they perceive to be deviating from the accepted norms of the group.[1] Everywhere in the world, there are psychiatric problems that are common. Adults with mental disorders impact around 10% of the population at any given moment.[2] By 2030, the

WHO predicts that unipolar depression would surpass ischemic heart disease and traffic accidents as the largest cause of illness burden.[3]

In both established and developing nations, stigma and cultural prejudices about psychiatry as a field, psychiatrists, and psychiatric patients persist. The majority of individuals in society are socially stigmatised and have bad attitudes regarding psychiatry and mental patients. Surprisingly, psychiatry as a speciality and psychiatrists are not exempt from societal pre-conceptions, stigma, and disparaging remarks among medical students, practitioners, and educators.[4,5]

Medical practitioners' negative attitudes also influence medical students' negative attitudes. According to a meta-analysis by Schomerus et al., attitudes regarding psychiatry and patients have not changed considerably over the past two decades.[6] Giving mental health treatment to people who are psychiatrically sick is greatly hampered by the general public's and mental health professionals' predominately unfavourable attitudes. Inattention to the necessary needs for mental health care, unnecessary referrals, indecent treatment, and a lack of social support and family acceptance are further effects. To provide effective mental health care services, it is essential to close the knowledge gap and raise awareness of mental disorders in society.[7,8,9]

Existing stigma and unfavourable attitudes have an impact not just on patient treatment but also on medical students' decisions to choose psychiatry as a vocation. The majority of medical students view psychiatry as a difficult and unrewarding field.[10] Few doctors choose to specialise in psychiatry, and there has even been reports of family pressure against choosing psychiatry as a career, which is another indicator of the stigma associated with psychiatric problems.[11]

Although there are conflicting findings in the current research about undergraduate (UG) medical students' attitudes, they are generally unfavourable. There are research that demonstrate benefits from brief psychiatric training during undergrad.[12] Positive attitude effects were discovered to be transient, while a few other investigations revealed no change in attitude.[13-15] There is a global issue with getting medical students to choose psychiatry as their area of specialisation.[16] Showing a positive attitude and choosing psychiatry as a vocation are incompatible.[17]

One study found that the teaching of psychiatry at the undergraduate level was either disorganised or improper.[18] According to other studies, psychiatrists are thought to earn less money, have lower respect, and prestige than other specialists.[16,17,18,19] Additionally, social stigma, the disapproving attitude of nonpsychiatric faculty, and the presumptive higher rate of psychiatric morbidity in psychiatrists are mentioned.[20,21,22]

The majority of developing attitudes regarding speciality subjects happens throughout UG training. As a result, medical students' attitudes are crucial. Since medical students are the future psychiatric trainees, it is crucial to understand their attitudes about the field. The purpose of the study was to determine how undergraduate medical students (UGs) with varying years of medical education perceived, knew about, and felt about the field of psychiatry as a career choice.

MATERIALS AND METHODS

Study Design

In a private medical college in telangana, a cross-sectional research was carried out. 120 second-year students and 132 house surgeons were each involved in the study. After receiving their signed agreement to participate in the study, they were given a standardised and structured questionnaire [Attitude Toward Psychiatry-30 (ATP-30)] and a semi-structured socio-demographic profile to complete. A total of 106 house surgeons and 100 second year students submitted the completed questionnaire to the researchers. The replies were noted, and SPSS version 21 was used to analyse the data.

The Attitude Toward Psychiatry-30

The ATP is a 5-point Likert scale created and approved by Burra et al. in Canada.[23] The scale, which consists of thirty items with positive and negative wording, gauges how strongly the respondent feels about various facets of psychiatry. A score of 1 indicates a very positive attitude, a score of 5 indicates a very negative attitude, and a score of 3 indicates a neutral attitude. Each item that was positively stated received a score that was converted by deducting it from 6. The range of the overall scores is 30 to 150. A global score of 90 (average score of 3) is thought to show a neutral attitude. A global score of 90 (scores of 1 and 2 combined) suggests a negative attitude toward psychiatry. A score of >90 (scores of 4 and 5 combined) denotes an overall favourable attitude. Thirty questions were examined individually and in groups of questions based on themes. After

receiving clearance from the Institutional Review Board and the college administration, the study was carried out.

RESULTS

The questionnaire was completed and turned in by 80.3% of house surgeons and about 83.3% of second year students. Chi-square test and Student's t-test were used to compare socio demographic and attitudinal differences across groups.

The average age of second-year students was 19.7 years and 24.13 years for house surgeons (P = 0.001) (Table 1). Other sociodemographic traits were statistically similar to one another (Table 2). Compared to the house surgeons, junior students show a higher positive view about psychiatry (83% vs. 48.1%; P = 0.001). The house surgeons and second-year students' respective mean ATP-30 scores were 94.5 and 99.7 (P = 0.001). Nevertheless, only 7 (6.6%) house surgeons and 10 (10%) second-year students affirmed that they wished to pursue a career in psychology (Table 3). But the house surgeons had a stronger conviction that mental patients and disorders were fascinating (UG = 3.06 ±1.07, house surgeons = 3.46 ±1.01, P = 0.007).The house surgeons scored considerably higher than the other groups when the mean scores of items 13, 24, and 26 (Table 5) were compared between the groups (P = 0.001, 0.01, and 0.002, respectively). In addition, the group had a higher mean score on item number 23 (importance of psychiatry in MBBS curriculum) (P = 0.003). Responses to items 8 and 19 in Table 4 reveal that undergraduate students scored substantially higher (3.67± 1.06 vs. 2.9± 1.1, P = 0.001 and 3.71 ±1.1 vs. 3.03 ±1.2,P = 0.001) and had more unfavourable opinions of psychiatrists. Likewise, UG students scored higher on items 1, 2, 6, 7, 17, and 22 (Table 7) that relate to unfavourable attitudes of psychiatry and psychiatrists. The average scores for house surgeons are higher for items 20, 25, and 28, which relate to positive opinions of psychiatry (Table 6).

Table 1: Sociodemographic characteristics of the participants.

Variable	Group of Medical Students(N)	Age Mean Sd	Tscore (Df)	P
Age	House Surgeon(106) 2nd (100)	24.13±1.4 19.7±1.5	21.15 (204)	0.001
Characteristics	2nd Year	House Surgeon	X2(Df)	P
Sex				
Male	68(68)	67(63.2)	0.52(1)	
Female	32(32)	39(36.8)	0.56	
Family Type				
Nuclear	26	43	5.2(2)	0.07
Joint	26	19		
Nuclear Extended	48	44		
Locality				
Rural	56	62	0.13(1)	0.78
Urban	44	44		
Monthly Income in Rs.				
<10000	5	3	0.66(2)	0.71
10000-15000	56	60	-	-
>15000	39	43	-	-

Table 2: Attitude Toward Psychiatry-30 scores in terms of cutoff value 90 representing attitude toward psychiatry in both the groups (n=206)

Group	Attitude			X2(Df) 27.5(2)	P 0,001
	Positive (Atp>90)(%)	Neutral (Atp=90(%)	Negative (Atp<90)(%)		
House Surgeons N=(106)	51(48.1)	7(6.6)	48(45.3)		
2nd Year (N=100)	83(83)	2(2)	15(15		

X2-CHI SQUARE TEST, df- Degree of freedom, ATP- Attitude Towards Psychiatry

Table 3: I would like to be a psychiatrist (item 4 in attitude toward psychiatry 30)

Responses	2nd Year (N)	House Surgeon(N)	T(Df)	P
Strongly Agree (%)	10(10)	7(6.6)		
Agree	40	49		
Neutral	23	15	7.2(4)	0.12
Disagree	26	39		
Strongly Disagree	1	4		

t-t value, dt-degree of freedom

Table 4: Means of scores on items measuring attitude toward psychiatric patients and illnesses.

Items	Group of Medical Students Mean Sd		T(Df)	P
	2nd Year	House Surgeons		
-Psychiatry Patients are Human (27)	3.7± 1.1	4.0± 0.97	2.2(204)	0.02
-Psychiatric Illnesses need Attention (12)	3.48 ± 1.4	3.70 ± 1.3	1.02(204)	0.30
-Psychiatric Patients are Interesting (29)	3.06± 1.07	3.46± 1.01	2.7(204)	0.007
-Interesting to Unravel Cause (18)	3.58± 1.04	3.85 ± 1.03	1.4(204)	0.16

SD-standard deviation , t-t value , df-degree of freedom

Table 5: Responses of items measuring attitude toward psychiatric teaching

Items	Group of- Medical Students Mean Sd		T(Df)	P
	2Nd Year	House Surgeon		
Most of the Facts in Psychiatry are Vague(26)	3.01± 1.1	2.7± 1.06	-2.2(204)	0.02
Psychiatry has very little Scientific Information(13)	3.41 ±1.07	2.8± 1.04	-4.3(204)	0.001
Psychiatry is so Unscientific that even Psychiatrists Can't Agree to Scientific Basis(24)	3.06± 0.96	2.7± 0.93	-2.6(204)	0.01
Psychiatric Teaching Increases Understanding of Medical & Surgical Patients(9)	3.45± 0.93	3.20± 0.97	-1.7(204)	0.08
Psychiatry is an Important Part of Curriculum(23)	3.22± 1.20	3.72± 1.13	3.06(204)	0.003
Students who think their Psychiatric Ug Training Valuable(10)	3.37± 1.0	3.37± 1.4	-0.44(204)	0.66
Psychiatry is so Amorphous that it Cannot be Taught Effectively(30)	2.82± 1.2	2.50± 0.87	-1.8(204)	0.07

SD-Standard deviation , t-t value , df- difference of freedom , p significant (two tailed) 0.05

Table 6: Mean responses of items measuring attitude toward psychiatric treatment and hospitals

Items	Group of Medicos	Mean Sd	t(df)	p
	2nd Year	House Surgeon		
Efficacy of psychotherapy (5)	3.30±1.09	3.4±1.1	0.44 (204)	0.66
Psychotherapy is fraudulent (8)	3.67±1.06	z2.9±1.1	−4.7 (204)	0.001
With therapy, patients improve (14)	3.3±1.1	3.6±0.9	2.36 (204)	0.02
Psychiatric treatment causes patients to worry about symptoms (16)	2.9±0.91	2.69±0.87	−2.6 (204)	0.009
Little that psychiatrist can do for their patients (19)	3.71±1.1	3.03±1.2	−4.2 (204)	0.001
Psychiatric treatment has become effective (25)	3.5±1.05	3.94±0.86	2.77 (204)	0.005
Psychiatric hospitals little more than prisons (3)	3.15±1.1	2.70±0.9	−3.3 (204)	0.001
Psychiatric hospitals have specific contribution to make to the treatment of mentally ill (20)	3.4±1.05	3.93±0.96	3.3 (204)	0.001

SD – Standard deviation; t – t value, df – Degree of freedom, P significant (two tailed); 0.05

Table 7: Means of scores on items measuring attitude toward psychiatrists and psychiatry

Items	Group of Medicos	Mean SD	t(df)	p
	2nd Year	House Surgeons		
Psychiatrists seem to talk nothing but sex (7)	3.60±0.98	2.9±1.04	−4.7 (204)	0.001
At times it is hard to think of psychiatrists equal to other doctors (22)	3.4±1.1	2.6±1.07	−4.5 (204)	0.001
I would like to be a psychiatrist (4)	3.3±1.1	2.6±0.9	−1.9 (204)	0.05
Psychiatrist tend to be as stable as average doctors (15)	3.45±0.94	3.33±1.00	−1.16 (204)	0.24
Psychiatrists get less satisfaction from their work than other specialists (17)	3.25±0.91	2.7±0.91	−3.5 (204)	0.001
If I were asked what I considered to be the three most exciting specialties psychiatry would be excluded (21)	2.82±1.27	2.39±1.06	−2.9 (204)	0.004
The practice of psychiatry allows the development of really rewarding relationship with people (28)	3.62±0.091	4.03±0.78	3.2 (204)	0.001
Psychiatry is unappealing because it makes little use of medical training.(1)	3.4±2.7	2.7±1.20	−3.98 (204)	0.001
On the whole, people taking up psychiatric training are running away from Participation in real medicine (6)	3.13±1.0	2.79±0.9	−2.8 (204)	0.005
Psychiatry is a respectable branch of medicine (11)	3.13±1.16	3.24±1.2	0.41 (204)	0.68
Psychiatrists talk a lot but do very little (2)	3.32±1.16	2.7±1.08	−3.8 (204)	0.001

SD – Standard deviation; t – t value; df – Degree of freedom, P significant (two tailed); 0.05

DISCUSSION

The goal of the current comparative study was to determine how medical students with varying years of medical education felt about psychiatry as a field of study and a potential career path. Compared to house surgeons, second year medical students are more upbeat. Other investigations that were undertaken in Bahrain and Kenya[17] also produced similar results.[24] It is unclear if this change in attitude toward psychiatry was brought on by a decline in interest in the profession or a rise in interest in other areas. A negative attitude was displayed by 15% of second year students and 45.3% of house surgeons.

The fourth item, "I'd want to be a psychiatrist," has drawn special attention since it shows a connection between general attitude and profession choice. Only 10 students (10%) from the second year and 7 (6.6%) from the house surgeon group chose to become psychiatrists. A similar gap between having a positive outlook and selecting psychiatry as a vocation was discovered in studies conducted in Kenya, Pakistan, the USA, and Kenya[17,25] as well.[26] One Israeli research indicated that just 6% of medical students who choose to pursue psychiatry as a residency chose the field as their profession.[27]

The pervasive stigma associated with mental illnesses is one explanation for the possibility of dissonance. The speciality is avoidable because to societal stereotypes that are associated with medical personnel.

We discovered that both groups had a good attitude toward psychiatric patients and mental diseases, and they all concurred that such patients are not just people but also intriguing and in need of a great lot of care (Table 4). Similar findings were observed in a second study[25] that used a slightly different approach and questionnaire and was done at medical colleges in Karachi and Abbottabad, Pakistan.

Both groups demonstrated that psychiatry is a crucial component of the medical college curriculum, that it aids in their ability to comprehend both medical and surgical patients, and that their undergraduate study in the subject was beneficial. Despite the fact that the majority of students concurred that psychiatry is imprecise and unscientific. It could be because, in contrast to other medical or surgical specialities, psychiatry lacks confirmatory tests like laboratory analysis or imaging and instead relies more on psychological tests and instruments to explain a variety of diseases (Table 5). In contrast to a research conducted in Pakistan, which found indifferent answers for the majority of the categories related to knowledge and instruction, our study's findings are positive.[25]

In addition, students expressed a favourable attitude toward half of the questions about psychiatric hospitals and treatment (Table 6) and agreed that psychiatric hospitals have a unique role

to play in the treatment of those who are mentally ill, that psychiatric treatment is now effective, and that psychotherapy is effective. Junior students, in contrast to interns, believed that psychiatry was false and that psychiatric facilities were little more than prisons. Both groups acknowledged that psychiatrists are limited in what they can do for their patients. The difference in attitude may be brought about by second year students seeing mental units less often, especially indoor wards.

This demonstrates that UGs are not only ignorant of the scientific underpinnings of non - pharmacologic modes of therapy, but also that psychiatric instruction and training are in a bad state at the UG level.[18] It underlines the necessity of integrating community health services with mental health institutions.

The majority of students do not view psychiatry as a viable career option; psychiatry would not be included in their list of the top three exciting specialties, and unlike junior students, the house surgeons concurred that psychiatrists are not on par with other medical professionals, receive less satisfaction, talk a lot but perform very little, and that those pursuing psychiatric training are avoiding taking part in actual medical practice. It could be because medical educators and practitioners from other specialized divisions frequently make ignorant stereotypical statements and remarks about psychiatrists. The similar issue was mentioned by Al-Ansari et al. in their study carried out in Bahrain in 2002.[24] Medical educators frequently say that psychiatrists have a negative public image because they only prescribe sedatives and tranquillizers, and their work is neither intellectually challenging nor financially gratifying. Additionally, it has been hypothesized that psychiatrists themselves are more prone to mental problems.[28]

Some solutions and potential interventions might be recommended to lessen the stigma that is now prevalent worldwide and to make psychiatry a more desirable career option.

Instead than shortening them, psychiatric clerkships should last longer. Through their extensive exposure to our field, medical students will learn to fully understand the work that we perform. Students should be exposed to several psychiatric subspecialties such as sleep and headache clinics, child psychiatry, addiction psychiatry, and geriatric psychiatry. By highlighting the nature, prognosis, and treatment of mental disorders with higher relapse/recurrence risks, such as drug dependency and schizophrenia, the misconception that psychiatrists can do little to help their patients might be changed. We must come up with creative approaches to introduce them to our field. Interest will be generated by excellent instruction and clerkships with a range of clinical experiences. Modern neuroimaging tools can assist undergrads demonstrate the neurological underpinnings of mental diseases, which can improve public understanding of psychiatry.

This research, like many others, has certain limitations, notably its small sample size and exclusivity to medical students from one institution. In order to illustrate the general image of the country, it is advised that a research be carried out with a bigger sample size and homogeneous qualities of individuals from different medical colleges representing different parts of the country. Our area of interest was known to the research participants, which may have impacted some of their responses.

CONCLUSIONS

In the current study, we found that the medical students have multiple lacunae in their knowledge about psychiatric patients, psychiatric illness, psychiatric treatment, psychiatrist and subject of psychiatry. The second year medical students have more positive attitude than the intern students. Increasing negative attitude in higher classes might be due to poor social image of psychiatrist, relatively financially unrewarding specialty, poor teaching in under graduation, lesser duration of psychiatric clerkship, ridiculous stereotypic comments and remarks by medical teachers and practitioners belonging to other specialty branches. Through exposure in depth and high quality teaching and clerkship containing a variety of clinical experience will decrease the negative attitude. It has been felt that psychiatry remains neglected subject during the UG training. Thus, there is a need to reassess and modify accordingly the UG medical student's current curriculum. Therefore, it is necessary to review and adjust the present curriculum for UG medical students.

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Review Article

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A Study to Assess the Effectiveness of Guided Imagery on Level of Stress Among the Elderly in Selected Old Age Homes of Aurangabad City

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Abstract

Statement: A study to assess the effectiveness of Guided Imagery on level of Stress among the Elderly in Selected Old Age homes of Aurangabad city, Maharashtra. Objectives:[1] To assesses the level of stress among the elderly.[2] To determine the effectiveness of Guided Imagery on level of stress among elderly.[3] To associate the level of stress among the elderly with their selected demographic variables.

Hypothesis: H_0: There is no significant reduction in the level of stress among the elderly after administering guided imagery. H_1: There is significant reduction in the level of stress among the elderly after administering guided imagery. Research methodology: Approach and Design: Evaluative approach. A quasi experimental nonequivalent control group design was used for study. Sampling technique: Non probable convenient sampling technique was used for selection of sample. Sampling Size: 60 (Experimental-30, Control-30). Setting: Old age homes. Reliability: Reliability of tool was done with the help of split half method (r = 0.87). Pilot Study: After reliability pilot study was conducted on 10 samples. Tool: Pre test done (Both experimental & control group) with the help of modified stress assessment scale through structural interview schedule. After assessment of stress level prior to intervention than 20 minute guided imagery given to experimental group with the help of audio tape of guided imagery CD for 14 days. On 15th day onward post test was done in experimental and control group. Results: Study finding of level of stress among the Elderly: In Experimental group 16.7% of the elderly had mild stress, more than half (56.7%) of them had moderate stress and 26.7% of them had severe stress. In control group, 40% of them had mild stress, 56.7% of them had moderate stress and 3.3% of them had severe stress.Study findings of effect of guided imagery: In pre test, in Experimental group, 16.7% of the elderly had mild stress, more than half (56.7%) of them had moderate stress and 26.7% of them had severe stress. In post test, 80% of them had mild stress and 20% of them had moderate stress. This indicates that the stress level significantly reduced after guided imagery.The 't' value was found to be 12.9 at 29 degrees of freedom. P-value at 29 degrees of freedom was 0.000. Since the p-value is small (less than 0.05), the null hypothesis is rejected. Stress score in pretest was 97.2 which reduces to 66.6 in posttest. This indicates that the level of stress of elderly improves significantly after guided imagery.The 't' value was found to be 6.3 at 58 degrees of freedom. P-value at 58 degrees of freedom was 0.000. Since the p-value is small (less than 0.05), the null hypothesis is rejected. The mean difference in stress score is 30.6 for experimental group which was 5.1 for control group.For experimental gorup the average change in stress score is significantly higher tham that in control group. Conclusion:The study revealed that guided imagery is very effective and safe method to reduce the level of stress among the elderly.

Keywords: Assess; Guided Imaginary; Stress; Elderly; Old age homes.

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INTRODUCTION

A man`s existence is usually divided into 5 main ranges particularly infancy, childhood, adolescence, adult hood and vintage age. In every of those ranges and character has to locate himself in extraordinary conditions and face extraordinary problems. In vintage age bodily power deteriorates, intellectual balance diminishes. The world's aged population is 650 million. By 2050, the "greying" population is forecast to at tain 2 billion. By 2050 approximately 80% of the aged may be residing in growing countries.[1]

Aging also cancarry many modifications at a time whilst they are least capable of adapt to extradeit's far a famous axiom that the aged human beings have problems, now no longer simply bodily disorder. The aged human beings are at risk of emotional and strain due to the feel of loss that come from the demise of pals and own circle of relatives members, lack of outcomes, lack of autonomy in addition to from retirement.[2]

In greater current times, the conventional function of the own circle of relatives is being shared with the aid of using establishments inclusive of vintage age homes. It is regularly assumed, and occasionally argued, that the absence of familial care and environment result in strain amongst the citizens of vintage age homes. Stress is a first rate motive of melancholy and Alzheimer's disorder in vintage age. They has recognized a place of the mind which shrinks in vintage age ensuing in melancholy and Alzheimer's disorder. The shrinkage of a place of the mind known as the anterior cingulate cortex brings about the discharge of excessive degrees of strain hormones.[1]

God created our bodies with best stability and restoration ability. We have been designed with congruence and an herbal rhythm. (The rhythmic commencing and closing of the valves of the coronary heart, the coagulation of blood to shape a restoration overlaying or scab on a wound, the messaging device of our nerves which alert our brains to act are examples). Guided imagery isn't hypnosis, sorcery, witchcraft, voodoo, or demonic. It isn't delivering manipulate of your thoughts in any manner.[3]

But Imagery can stimulate modifications in physical capabilities together with coronary heart rate, blood strain and respiration patterns. It can assist faucet internal strengths to assist the affected person locate hope, braveness and different traits that may assist the affected person to address a lot of conditions.[4]

Guided imagery is a shape of targeted rest that enables creates concord among the thoughts and frame. It is a manner of focusing your creativeness to create calm, non violent pixon your thoughts, there by supplying an "intellectual escape." Guided imagery presents a effective mental approach that complements a individual`s coping competencies. Imagery includes all of the senses, in addition to one`s entire frame and emotions. It is a manner of viewing your ideas, feelings, studies and interpretations.[5]

More ever, Guided imagery is a talent that may be discovered in each inpatient and outpatient settings and it could learn with the aid of using nurses. Teaching rest competencies is regular with the idea that the sufferers who take part of their care are greater autonomous. Once its miles discovered they are able to exercise it themselves. Relaxation education is likewise cost-effective. For sufferers, the purpose of curing imagery is to update the badpix that initiate fear, helplessness and tension with superbpix of restoration and wellness that make a contribution to recovery.[6]

Stress control makes a specialty of decreasing the secretion of cortisol and the cate cholamine which wreck the stability of the immune device. Mental imagery, with the aid of using changing mind biochemistry, can also additionally have an impact on or modify the immune device cells. The each day periods of the guided imagery makes heavy use of the imagery in converting the participant`s perceptions of the pressure via cognitive/imagery restructuring. The individual is endorsed to photograph the salubrious modifications taking place. Imagining the general feeling of fitness and wellnessappears to actualize the frame is turning intoentire, healthy, beautiful and powerful.[7]

Within the year 2002 there had been an anticipated 605 million vintage people inside the global, of which four hundred million are dwelling in low earnings countries. Italy and Japan have the very best percentage of older men and women (approximately sixteen. 7% and sixteen% respectively within the 12 months 2003). By 2025 the variety of elderly human beings is anticipated to rise more than 1.2 billion with approximately 840 million of these in low earnings nations.[8] In India most effective few research were conduced, these also hospital bases. The main reasons of illness are: cataract and visual impairment (88%), arthritis and locomotive problems (40%), cardiovascular illnesses along with hypertension (18%), neurological issues (18%), breathing problem (16%), and psychiatric trouble (nine%), lack of hearing (8%). The intellectual

fitness of elderly is any other essential area in information their normal health situation. Mental health situation of the aged includes depression, delirium, psychosis & Dementia. Over 10% of India's elderly be afflicted by melancholy and forty - 50% of aged required psychotic or mental intervention.[9] In India although the percentages of elderly persons to the entire population is low in comparison to the advanced international locations, though, absolutely the size of elderly population is great. For the yr 2003 the SRS estimates are 7.2 % of general populace had been above the age of 60 years.[10] The aged populace is large in standard and developing due to advancement of health care schooling. These humans are confronted with numerous physical, psychological and social role adjustments that assignment their sense of self and ability to live happily. Many human beings revel in loneliness and despair in vintage age, both because of living on my own or because of loss of close family ties and decreased connections with their way of life of origin, which results in a lack of ability to actively take part inside the network activities. With advancing age, its miles inevitable that people lose reference to their friendship networks and they locate it greater hard to initiate new friendships and to belong to new networks.[11]

REVIEW OF LITERATURE

The extensive review of the literature has been done and arranged in the following headings,

- Literature review related to Guided imaginary
- Literature review related to stress in elderly
- Literature review related to guided imaginary on stress

A study was conducted by Senthil Kavitha and Sasikala G. on 'effective guided imagery technique on premenstrual syndrome (PMS) was measured among college girls'. The quasi experimental one group pre test and post test research design was used for study. Sample size 20 college girls were taken for study. The non probability convenient sampling technique was used. The standardized premenstrual stress questionnaire which had 20 items used for stress assessment. Four week guided imagery visualization given to them. The result was shows that guided imagery highly effective for treatment of premenstrual syndrome in college girls.[12]

A study was conducted by Tusek D.L., Cosgrave D M, to examine the effectiveness of guided imagery on length of stay, pain and anxiety in cardiac surgery patients. 100 patients were randomized into one of two groups. Participants were between the ages of 18 and 80 years, included both male and female. Group I received routine care. Group II listened to a guided imagery tape 1-3 days prior to surgery to 5 days post up. All patients rated their pain and anxiety daily, score 0.10. Length of stay was also measured. Result was showed a significant and positive impact on pre and postoperative anxiety, length of stay and pain in patients.[13]

Carolyn Aldwin & Loriena A. Yancure conducted study on 'Effects of stress on health and aging' although older adults are thought to experience more stress and to be more vulnerable to its adverse effects, they often report less stress than younger adults and sometimes show more resilience. Paradoxically, while stress sometimes has long-term positive effects on well-being, studies differ as to whether this increases or decreases with age. So that older individuals have learned to appraise and cope differently with stress. This protects them in spite of their increased physiological vulnerability and may also increase the possibility of stress-related growth and optimal aging.[14]

RESEARCH METHODOLOGY

Research Approach: Evaluative approach

Research Design: A quasi experimental nonequivalent control group design

Setting of the study: Old age homes in Aurangabad city.

Sample Size: 60 (Experimental-30, Control-30).

Sampling Technique: Non probable convenient sampling technique was used for selection of sample.

Inclusive criteria

- Willing to participate.
- Age group 60 years & above.
- Able to relax for 20 to 25 min.

Exclusive Criteria

- Seriously ill during the period of data collection
- Previously exposed to Guided Imagery.

Tool and Technique

Structured questionnaire was developed and modified stress assessment scale was developed for the study.

The too was divided in following sections

Section I: Dealt with the demographic data of the elderly.

Section II: Dealt with the modified stress assessment scale.

Modified stress assessment scale consist of total 38 questions which to be mark as an always, most of the time, some time and never. Some question carries positive scores and some carries negative scores.

Stress Score

No stress	00 - 38
Mild stress	39 - 76
Moderate stress	77 - 114
Severe stress	115 - 152

The score system carried marks i.e. always- 1, most of the time- 2 sometime-3, never – 4 for positive respond & always- 4, most of the time- 3, sometime- 2, never – 1 for negative respond.

The negative question is 1 to 12, 20, 22, 23, 24, 25, 27, 30, 34, 37 and negative question is 13 to 19, 21, 26, 28, 29, 31,3, 33, 35, 36, and 38.

Reliability: It was established by Karl Pearson's Correlation coefficient. The reliability of tool was calculated and it was 0.76.

Validity: The content validity of structured questionnaire was found by submitting the tool to the experts in the field of Psychiatry by 13 expert i.e. Psychiatrist – 3, Nursing Faculty M. Sc. Nursing in Mental Health (Psychiatric) - 6, Psychologist – 2 , Bio-statistician-2.

Pilot study: It was conducted on 10 elderly in the Aastha Foundation of Aurangabad city.

METHOD OF DATA COLLECTION

The data was collected from 01/01/2022 to 14/01/2022 in Matoshri Vridha Shram, Aurangabad. Prior the data collection permission was obtained from the authorities from old age homes. The purpose of the study and method of data collection was explained to the subjects for getting true responses. The assurance given regarding the confidentiality of the information. An informed consent was obtained from the respondents indicating their willingness to participate in the study. The subjects who fulfill the sampling criteria were taken for the study from the selected old age home. Total 60 sample selected for study out of experimental was 30 & control group 30 with help of non probable convenient sampling technique. The data was collected from elderly present at old age homes with help of modified stress assessment scale through structured interview schedule.

Investigator administered the modified stress assessment scale to the elderly to obtain the pre test. After that investigator given guided imagery intervention from 01/01/2022 to 14/01/2022 with the help of audio CD daily for next fifteenth day. Post test was administered with same scale. After the data gathering process the investigator thanked all the study subjects as well as the authority persons for their co-operation. Guided imagery intervention was given to control group also after post test.

RESULTS OF THE STUDY

Section A: Demographic data analyzed using frequency and percentage.

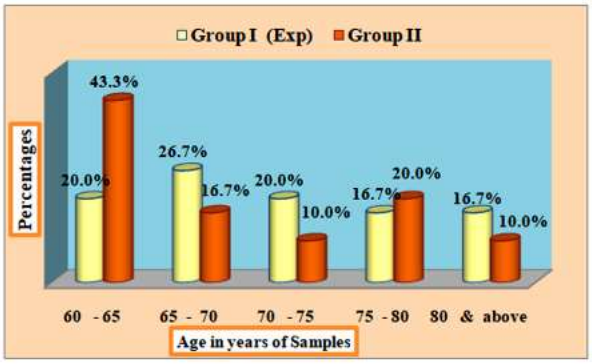

Fig. 1: Distribution of the subjects according to their Age

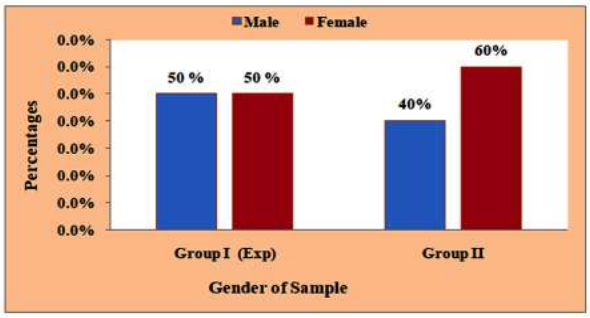

Fig. 2: Distribution of the subjects according to Gender

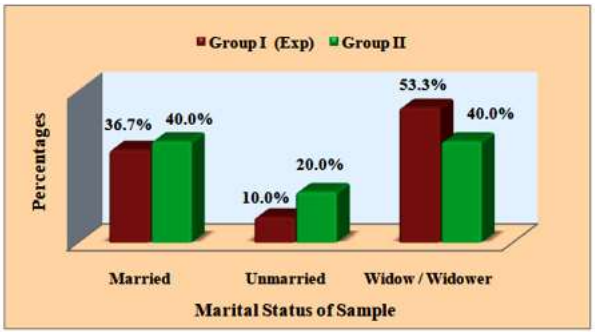

Fig. 3: Distribution of the subjects according to Marital Status

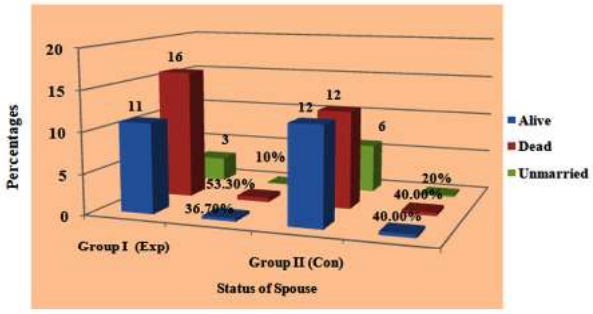

Fig. 4: Distribution of the subjects according to Status of Spouse

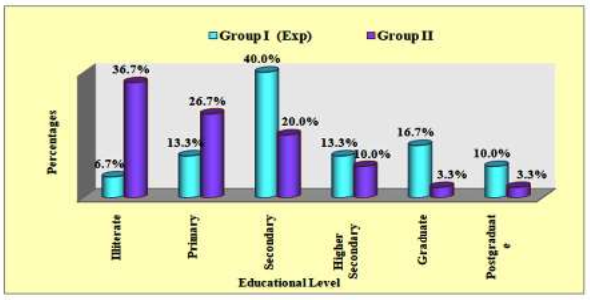

Fig. 5: Distribution of the subjects according to the Educational Status

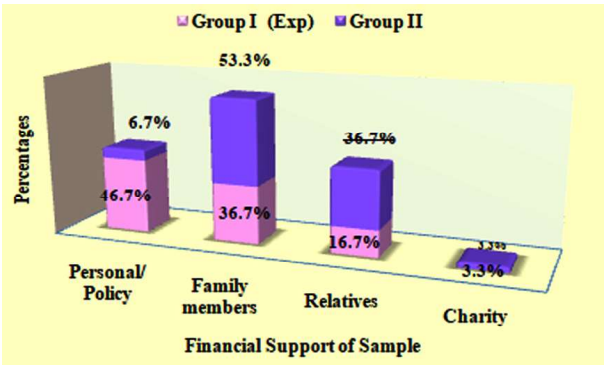

Fig. 6: Distribution of the subjects according to the financial support

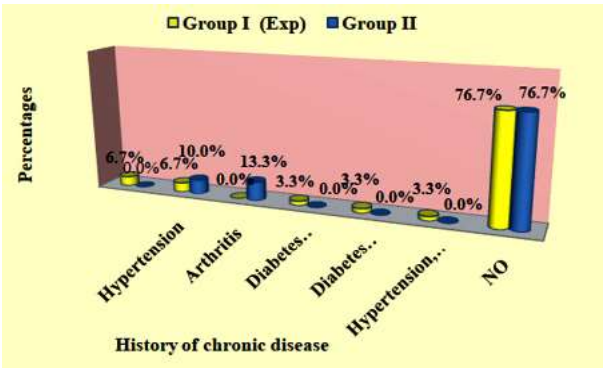

Fig. 7: Distribution of the subjects according to the history of chronic diseases.

Section-B: Analysis of Data Related to the level of Stress among the Elderly.

Table 1: Level of stress among the geriatrics in experimental and control group

(N= 30 experimental group, 30 control group)

Sr. No.	Stress Level	Group I (Exp)		Group II (Con)	
		F	%	F	%
1	No stress (Score 0-38)	0	–	–	–
2	Mild stress (Score 39-76)	5	16.7%	12	40.0%
3	Moderate stress (Score 77-114)	17	56.7%	17	56.7%
4	Severe stress (Score 115-152)	8	26.7%	1	3.3%
	Total	30	100%	30	100%

Section-III: Analysis of Data Related to the Effectiveness of Guided Imagery on Stress Among Elderly

Table 2: Effectiveness of Guided Imagery on stress among elderly

(N= 30 experimental group, 30 control group)

Sr. No.	Stress Level	Pre Test		Post Test	
		F	%	F	%
1	No stress (Score 0-38)	–	–	–	–
2	Mild stress (Score 39-76)	5	16.7%	24	80.0%
3	Moderate stress (Score 77-114)	17	56.7%	6	20.0%
4	Severe stress (Score 115-152)	8	26.7%	–	–
	Total	30	100%	30	100%

Table 3: Paired t-test for effectiveness of guided imagery among elderly:

Paired t-test was used for comparison of pretest and posttest stress scores among elderly.

(N= 30 experimental group, 30 control group)

-	Mean	SD	t	df	p-value
Pretest	97.2	18.8	12.9	29	0.000
Posttest	66.6	12.0			

T value was found to be 12.9 at 29 degrees of freedom. P-value at 29 degrees of freedom was 0.000. Since the p-value is small (less than 0.05), the null hypothesis is rejected. Stress score in pretest was 97.2 which reduces to 66.6 in posttest. This indicates that the stress of elderly improves significantly after guided imagery.

Table 4: Two sample t-test for comparison of stress of experimental and control gropup:

Two sample t-test was used to compare the stress among elderly in experimental and control groups.

	Mean	SD	t	df	p-value
Group I (Exp)	30.6	13.0	6.3	58	0.000
Group II(Control)	5.1	7.9			

Section -IV: An Analysis of Data to Find Relationship between the Level of stress among the elderly with their Selected Demographic Variable

Table 5: Relationship between the level of stress among the elderly with their selected demographic variables

(N= 30 experimental group, 30 control group)

Demographic variable	F	p-value
Gender	0.0	0.840
Age	1.6	0.177
Marital Status	1.4	0.248
Status of Spouse	1.4	0.248
Education	1.6	0.185
Financial support	1.2	0.303
H/O Chronic disease	0.6	0.713

Table 6: One-way ANOVA: score versus Gender

Source	DF	SS	MS	F	P
Gender	1	16	16		
Error	58	23204	400	0.04	0.84
Total	59	23220			

Table 7: One-way ANOVA: score versus Age

Source	DF	SS	MS	F	P
Age	4	2474	618		
Error	55	20746	377	1.64	0.177
Total	59	23220			

Table 8: One-way ANOVA: score versus Marital Status

Source	DF	SS	MS	F	P
Marital Status	2	1110	555		
Error	57	22110	388	1.43	0.248
Total	59	23220			

Table 9: One-way ANOVA: score versus Status of Spouse

Source	DF	SS	MS	F	P
Status of Spouse	2	1110	555		
Error	57	22110	388	1.43	0.248
Total	59	23220			

Table 10: One-way ANOVA: score versus Education

Source	DF	SS	MS	F	P
Education	5	2942	588		
Error	54	20278	376	1.57	0.185
Total	59	23220			

Table 11: One-way ANOVA: score versus Financial support

Source	DF	SS	MS	F	P
Financial support	3	1449	483		
Error	56	21771	389	1.24	0.303
Total	59	23220			

Table 12: One-way ANOVA: score versus H/O Chronic disease

Source	DF	SS	MS	F	P
H/O Chronic disease	6	1524	254		
Error	53	21696	409	0.62	0.713
Total	59	23220			

CONCLUSION

The anlysis of finding shows that the experimental gorup the average change in stress score is significantly higher than that in control group. This indicates that the stress of elderly improves significantly after guided imagery.

NURSING IMPLICATION

The findings of the study have implications for mental health nursing, Community health nursing practice, nursing education, nursing administration, Nursing research and industrial management.

MENTAL HEALTH NURSING

Mental health nursing based on the study findings we can say that industrial workers having moderate

to severe stress. So if they practice deep breathing exercise daily to manage their stress it will be effective for them to manage their stress and stress related problems.

COMMUNITY HEALTH NURSING

The geriatric population is more in community and due to stress they suffer many physical, psychological and social problems. Due to their problems family member also feel stressful environment in their home. So community health nurse can prevent these problems by using the findings of the present study she can educate and ask the community people to practice guided imagery technique to manage their stress in day to day life.

NURSING EDUCATION

In day to day life people are exposing to various stressful situations and this stress can lead to various health problems like physical, mental and social. Some peoples are prone to develop chronic illness. This health problem can be prevented by simple non pharmacological method i.e. guided imagery.

The special detail unit can be added in nursing curriculum. The guided imagery can bepracticed by student and also taught to patient. The nursing student also used guided imagery to reduce their stress. The nursing teachers can use the result of study as an informative illustration for the students.

NURSING ADMINISTRATION

The nursing administrator can use the study findings in their day today practice guided imagery for stress management and help other staff in the hospital to manage their stress. Study finding can be taught in the staff development program so that staff can manage their stress.

NURSING RESEARCH

The research study used quantitative approach but by using qualitative approach and descriptive study design to get answer to the exact stressor and problem due to them. And those findings can be generalized.

LIMITATIONS

- The study was carried out on a small population so the findings cannot be generalized for large population.
- The study was limited to the experience level of the researcher.
- The study was limited elderly those are above 60 years.
- The study was limited elderly only those elderly people living in old age home.
- The study is limited for short period.

RECOMMENDATIONS

On the basis of the findings of the study following recommendations have been made for further study.

- Similar study can be conducted on large subject to generalize the result.
- A study can be conducted to assess stress level in various age groups.
- The other alternative technique can be used along with guided imagery.
- The same study can be conducted for a longer period to get more reliable result.
- The comparative study to determine effectiveness of guided imagery in patient with various illnesses.
- The study can be done in various settings eg. College, School, Work places etc.

CONCLUSION

The guided imagery was effective in reducing the level of stress among the elderly.

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Review Article

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Space Medicine as a 25 Dimensional Methodology

T V Gopal

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Abstract

Indic scriptures use a generic term "Bhuta" meaning ghost, true, matter of fact, reality, (that which is or has been) existing, present, being or being like anything, consisting of, mixed or joined with. However, the term "Bhuta" is commonly narrowed to mean "Ghost" and the pertinent branch of healing in Ayurveda is reduced only to "Graha Chikitsa" which very roughly reflects psychology and psychiatry. Scoping the term "Bhuta" on a wider canvas may open many dimensions in "Space Medicine". Such as study is called "BhutaVidya" or "BhutaVijnana" in the Indic scriptures. It is a Vijnana or science that may be a 25 Dimensional methodology.

Keywords: Bhut; Mind; Body; Bhuma Vidya; Space Medicine.

INTRODUCTION

In his brief discourse 'Of false revenants', published in 1657, Francois Richard argues that the bodies of the dead can and do 'walk' among the living. According to Richard's interpretation of the existence of these revenants, until the human corpse loses its fleshy materiality and is reduced to bare bones by the processes of decomposition, the body retains a potential for activity and thus is vulnerable to reanimation by a witch or demon seeking a means to plague the living. In framing this argument Richard draws on Christian theology, natural philosophy and folkloric tales of the wandering dead to propose that the existence of these reanimated corpses represents proof of the supernatural forces at work in this world and beyond the grave."J.S.W. Helt, The 'dead who walk': materiality, liminality and the supernatural world in Francois Richard's 'Of false revenants', Mortality, Volume 5, Issue 1 March 2000, pages 7 - 17.

Indic scriptures use the term "Bhuta Vidya" to deal with the causes, which are directly not visible and have direct explanation in terms of the three doshas namely Vata, Pitta and Kapha. These three doshas indicate the condition of the human mind and body. In theory the cosmic elements or forms such as Deva, Asura, Gandharva, Yaksha, Rakshasa, Pitara, Pishacha, Naga and other demons or evil

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spirits have a say in the way the human mind gets impacted and in turn how the body responds.

These cosmic elements are classified into seven types, namely: adi-bhuta (the primordial), anupapadaka-bhuta (the unevolved or parentless), akasa-bhuta (aether), taijasa-bhuta (fire), vayu-bhuta (air), apas-bhuta (water), and prithivi-bhuta (earth).

The last five are called "Pancha Bhutas" and certain substances associated with them for healing are well known.

The traditional practices in India have been bordering on banishing those suspected to be possessed into the wilderness, evacuating the perceived area that is impacted, navigating the bhuta to the nearest Banyan Tree, worshiping Lord Ganesha and Lord Hanuman. Every village in India has a Banyan Tree a temple for Lord Ganesha and Lord Hanuman. The sounds and rituals associated with navigating a bhuta to the nearest Banyan Tree appear very rustic, rude and scary. Both Charaka and Susrutha recommend a set of vedic rituals. Susrutha goes on to add that the particular 'Bhuta' does not enter the person. Hence, it cannot be equated to "Mental Disorders".

"Every single psychological problem has a biological cause. This is not a philosophical position. This is a fact. Every mental event comes from the brain." - Eric Richard Kandel, Nobel Prize in Medicine, 2000.

Jinn from the Islamic theology is the most appropriate equivalent of Bhuta in Vedas and 'Holy Ghost' in Christianity.

"Indeed we created man from dried clay of black smooth mud. And we created the Jinn before that from the smokeless flame of fire"Surah Al-Hijr 15:26-27, The Holy Quran. Carl Jung saw the Holy Ghost as the crowning figure in God's revelation of Himself. For Jung, the Holy Ghost is that mysterious force which unites opposites and allows the transcendent to enter space and time. Through a process called "continuing incarnation", the Holy Ghost makes it possible for ordinary people to participate in "the sonship of God".

In the Indic scriptures, "Samvedi" is the colloquial term from the original Sanskrit word "Shamaneedresh" ("Shaman = Entertainment", "Edresh = Attributed"), meaning those professionals who entertain. The kings used to appoint these people to offer music services at the Samadhi [Grave] place, thus they were called "Samaadhi" which later became "Shamedi" meaning the Samadhi Temple musicians. Shamedis used to offer the "Shanai – Choughada Mridanga – Bheri – Veena" based entertainment near the Samadhi place. Shamans in vedic are called Yati Priests. Sage Angirasa refined all these practices and scripted them in the "Atharva – Angirasa Veda". This is the fourth veda and has not been duly studied in India for several centuries.

"Metaphysical ghosts cannot be killed, because they cannot be touched; but they may be dispelled by dispelling the twilight in which shadows and solidities are easily confounded. The Vital Principle is an entity of this ghostly kind; and although the daylight has dissipated it, and positive Biology is no longer vexed with its visitations, it nevertheless reappears in another shape in the shadowy region of mystery which surrounds biological and all other questions."George Henry Lewes, The History of Philosophy from Thales to Comte (1867), lxxxiv.

"Biology is the least of what makes someone a mother." ***- Oprah Winfrey***

MATERIALS AND METHODS

Sanat Kumara

Sanat Kumara[7] is a name one comes across in many Scriptures across the globe. Sanat Kumara and 144,000 volunteers from Venus liberated the earth long before Jesus and Galileo happened.

Sanat Kumara is the bearer of fire. Leading the armies of heaven, he takes up serpents in order to bring peace. He represents the Rose Cross and the Ruby Cross. His emblems are the Flying Eagle (the elevated glyph of Scorpio) and the Yule Log, which symbolizes the rekindling of the threefold flame in the heart of man. In some cultures, he is associated with the symbol of the fish, with the water of life and with the Pleiades.

The words "Sanat Kumara" in Finnish means wise elder. Sanat Kumara's presence has been recognized in the Native American tradition as "Wakan Tanka" - the Great Spirit.

In ancient Persia, Sanat Kumara was revered as Ahura Mazda who appeared to Zarathustra in the presence of six other beings of light (kumaras). It is said that in their presence, Zarathustra did not see his own shadow upon the earth, owing to their great light.

In Sanskrit, the language of the Vedas, Sanat Kumara means "eternal, beautiful youth." The seed syllable "Ra" also means flame or sacred fire.

Sanat Kumara is Dipankara, the lamp lighting buddha said to predate the historical buddha in a world cycle long past. He is sometimes equated

with Adibuddha, the original Buddha and is the being Gautama Buddha pledged himself to.

Sanat Kumara is referenced in the Koran, in Rumi's poetry and in other Islamic work as El Khidr. Speaking of El Khdir, the Prophet Mohammed says, "I have seen my Lord in the most beautiful of forms." The name El Khdir means "the green one," and "eternal youth" who found immortality by drinking the Water of Life.

Saint George has also been associated with El Khdir as dragon slayer who may ultimately slay the dragon in the book of Revelation.

Sanat Kumara taught "BhumaVidya" that integrates into eternal knowledge in a 25 Dimensional Space.

The Chapter 1, Section 3 of the Badarayana Brahma Sutras states:

Bhuma is Brahman.

and

Bhumasamprasadadadhyupadesat

Bhuma: the vast, the Infinite, the full; Samprasadatadhi: beyond the state of deep sleep (here the vital principle or Prana); Upadesat: because of the teaching. The term 'Bhuma' "does not denote numerical largeness but pervasion in the shape of fullness" i.e Sort of Integration.

SCIENCE – MIND AND BODY

Alan M Turing established a working definition for the term algorithm – to define what it means to compute. Turing looked at human "computers" i.e people who made computations. The task involved writing symbols on paper. Turing noted that "The behaviour of the computer at any moment is determined by the symbols… he is observing and his 'state of mind'." Turing proved that there was no mechanical set of rules for the solutions of all mathematical problems. Turing made computation explicit and eliminated the human element. Turing proved "that there were questions that were beyond the power of algorithms to answer". The machines were central to this historic work.

Alan Turing focused on the idea that the only way in which one could be certain that a machine thinks is to be the machine, and to feel oneself thinking. Are all thinking human beings also Turing machines?[1,2,4]

It has always been thought that presence of mind requires the presence of a certain kind of self-consciousness. Arguably, Turing had a narrow scope of "mind" in his machine model. Turing's work[8,9] paved way for structuring Computer Science and also clearly indicating its limitations. "Space Medicine" based on the approach presented in this paper requires a sophisticated model than the computational model.

Ghost in the Machine

The "ghost in the machine" is British philosopher Gilbert Ryle's description of René Descartes' mind-body dualism. Ryle's Concept of Mind critiques the notion that the mind is distinct from the body, and refers to the idea as "the ghost in the machine.". Gilbert Ryle writes as follows[1]

"There is a doctrine about the nature and place of the mind which is prevalent among theorists, to which most philosophers, psychologists and religious teachers subscribe with minor reservations. Although they admit certain theoretical difficulties in it, they tend to assume that these can be overcome without serious modifications being made to the architecture of the theory.... (The doctrine states that) with the doubtful exceptions of the mentally-incompetent and infants-in-arms, every human being has both a body and a mind.... The body and the mind are ordinarily harnessed together, but after the death of the body the mind may continue to exist and function.[5]

Such in outline is the official theory. I shall often speak of it, with deliberate abusiveness, as "the dogma of the Ghost in the Machine". I hope to prove that it is entirely false, and false not in detail but in principle. It is not merely an assemblage of particular mistakes. It is one big mistake and a mistake of a special kind. It is, namely, a category mistake."[6]

The ghost in the machine means the consciousness or mind carried in a physical entity.

Neutrino – Chasing the Ghost

"In Chasing the Ghost Leonard Cole provides a fascinating account of the life and scientific accomplishments of Nobel Prize winner Fred Reines in his quest to detect neutrinos - ghost like, subatomic particles that are important in understanding the composition of the universe and how it has evolved. Cole is exceptionally adept at presenting the scientific material with clarity and scientific accuracy - especially to the nonscientist." - Marcia J Rudy, PhD, Science Educator, Special Programs and Exhibits, New York Hall of Science.[3]

The name neutrino was coined by Enrico Fermi as a word play on "neutrone," the Italian word for neutron, which is what Wolfgang Pauli, who first postulated the particle, had dubbed it.

Physicists imagined neutrinos long before they ever found any. In 1930, they created the concept to balance an equation that was not adding up. When the nucleus of a radioactive atom disintegrates, the energy of the particles it emits must equal the energy it originally contained. But in fact, scientists observed, the nucleus was losing more energy than detectors were picking up. So to account for that extra energy the physicist Wolfgang Pauli conceived an extra, invisible particle emitted by the nucleus. "I have done something very bad today by proposing a particle that cannot be detected," Pauli wrote in his journal. "It is something no theorist should ever do."

Enrico Fermi described the nuclear reactor as "a crude pile of black bricks and wooden timbers". On December 1, 1942 he completed the construction of an experimental reactor pile under the Amos Alonzo Stagg Field, University of Chicago. This reactor pile in the first Stagg football field went critical on December 2, 1942. Enrico Fermi is the recipient of the 1938 Nobel Prize in Physics.

Neutrinos are called the "ghost particles" scattered across the universe. Neutrino can be 10 million times lighter than the mass of an electron. Neutrinos are referred to as ghostly because they are extremely volatile, or vaporous, cosmic particles that can pass through any kind of matter without changing.

Experimental work on Neutrinos is much lie the study of Consciousness – the unexpected scientific outcomes. Both may provide the equivalent of "BhumaVidya" in a 25 dimensional space.

CONCLUSIONS

There are many psychosomatic disorders, diseases caused by unknown reasons and diseases of mind or psychic conditions. This paper discusses a possible Indic scriptures based healing for such disorders within the category of "Space Medicine".

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Review Article

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The severity of Domestic Violence and its links to coping skills and Medication Compliance in Women with Mental Illnesses in Telangana

K Keeravani[1], Koneru Kavya Sri[2], Pramod Kumar Mallepally[3]

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Abstract

Domestic violence is widespread and has been linked to a number of mental health issues in all social classes. However, little research has been done on the severity of abuse among women who are mentally ill. The level of domestic violence frequently determines how much distress is felt. Abuse may be lessened by one's capacity for distress; this affects how severe the abuse is regarded to be. For women with mental illnesses, adherence behaviour to treatment may be influenced by the severity of maltreatment as well as distress tolerance. There is a dearth of research looking at these factors. In order to better understand the intensity of abuse, distress tolerance, and their relationship to medication adherence in women with mental illness, this study was conducted. This study was conducted in an outpatient setting at the psychiatry department of a tertiary care facility in Telangana. Following informed permission, 100 women with a mental illness who have been in remission for at least two months and are living in the community with family members following an episode of mental illness were purposively sampled in turn. Patients having a diagnoses of mental retardation, dementia, or psychotic symptoms were excluded due to dependability concerns. The initial evaluation of each participant involved the use of clinical and socio-demographic forms. Both the Composite Abuse Scale (CAS) and the Distress Tolerance Scale were used to gauge the intensity of the abuse and the amount of distress tolerance (DTS). Using the widely recognised Morisky Medication Adherence Scale, medication adherence status was evaluated (MMAS). Contrasting this sample with the general population, there was a high degree of abuse (mean 20.33, SD=20.55), as well as a high level of distress tolerance (mean 26.80, SD=12.07). The Tolerance (p=0.001) and Absorption (p=0.014) subscales of distress tolerance significantly positively correlated with scores in domestic abuse. There was no statistically significant correlation between domestic abuse scores and medication adherence. The results of this study allow us to draw the conclusion that women with mental illness experience a high amount of domestic abuse and have a higher threshold for discomfort. The perceived ability of the victim to bear emotional suffering is inversely correlated with the severity of domestic violence, while the amount of attention that is given to negative emotions is positively correlated. Due to the cross-sectional design and short sample size of the study, more data replication with a larger sample size and control group is required.

Keywords: Domestic violence; Distress tolerance; Medication compliance; Mental illness.

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INTRODUCTION

A variety of sexual, psychological, and physical coercive acts against women are considered domestic abuse.[1] The size of the issue in India is not known with certainty, however it is thought to be enormous. Two-fifths of married women reported experiencing physical or sexual abuse at some or the other time[2] according to the National Family Health Survey (2005–2006). Women's mental illness is etiologically related to domestic abuse. Domestic abuse and the prevalence of mood and psychotic illnesses in women are positively correlated.[3,4] Research on the effects of domestic abuse on women who have mental illnesses is scarce. There aren't many research that show how common domestic violence is among Indians.[5-7]Although the tolerance for distress is unknown, domestic abuse is generally connected with severe psychological distress.[8,9]

Distress tolerance (DT) is the capacity to withstand unpleasant emotional and physical experiences.[10] The propensity to lessen or flee unpleasant emotional experiences is known as DT, which is an individual's assessment of and expectations around experiencing distress.[11] DT is seen as a cross-diagnostic risk, sustaining, or preventing factor of psychological illnesses.[10] Distress tolerance is favourably related to domestic violence[12] and adversely related to health seeking abilities, according to some data.[13] Distress tolerance and physical and psychological abuse are negatively correlated with substance use disorder[14], according to Shorey et al. Indirect data points to a significant degree of stress in the general population related to medication non-adherence.[15] On the other hand, distress tolerance may interact with the environment and a person's drive to improve adherence to drug abuse therapy.[16] However, this association has to be investigated because it has not yet been found in other mental diseases. In addition to commonly experiencing mental illnesses, women who experience abuse also take psychotropic medications more frequently than the general population.[17]

Although abuse has been linked to poor medicine adherence in cases of physical illness, there hasn't been any research on this connection in cases of mental illness, therefore it has to be investigated.

Keeping in mind the above background, this study was conducted to access the levels and relationships of abuse, distress tolerance and medication adherence. There is a knowledge gap as to how abuse and distress tolerance are interrelated, and what is their association with medication adherence. We hypothesised that adherence has a negative association with abuse and a positive association with distress tolerance, while the interrelationship of abuse and distress tolerance is positive.

MATERIALS AND METHODS

This investigation was carried out in a tertiary care facility in Telangana at the outpatient psychiatry department. Following informed consent, one hundred women with mental illness who have been in remission for at least two months and are residing in the community with family members following an episode of mental illness were purposefully sampled in turn.

Due to dependability concerns, participants were disqualified if they had a diagnosis of mental retardation, dementia, or a psychotic condition. For this study, the presence of any psychiatric diagnosis according to ICD 10 (10th revision of the International Statistical Classification of Diseases and Related Health Problems) was considered as "Mental disorder". The diagnostic and remission states were evaluated by a psychiatrist using MINI Plus[19] case record files, discussion with the treating psychiatrist, and interviews with patients and important informants (s).

The following instruments were used to further evaluate each qualified participant: Age, education, occupation, marital status, socioeconomic status, family structure, place of residence, diagnosis, age at sickness onset, period of illness, family history of mental illness, history of childhood abuse, family drug use, attitude of others, etc. are socio-demographic and clinical forms.

The Composite Abuse Scale (CAS) is the most popular measure for determining how frequently domestic abuse occurs.[20] All 30 items on the measure receive a five-point Likert rating. The total number of elements (CAS Score) represents the level of abuse. More severe and regular abuse is indicated by higher scores. Items on the CAS can be divided into 4 subscales: harassment, severe combined abuse, physical abuse, and emotional abuse. These subscales are helpful in determining how various types of abuse affect women's physical and mental health. CAS has a high level of internal coherence and a Cronbach's alpha of greater than 0.85. The scale was converted into Telugu for this investigation. This scale is used in the population of India.[5]

The DTS, or Distress Tolerance Scale - The goal of

this 15-item self-report scale is to assess a person's capacity to withstand psychological suffering, or distress tolerance.[11] Four subscales can be created from the overall scale: (1) Tolerance - perceived capacity to withstand emotional suffering, (2) Absorption - focus being taken over by unfavourable feelings, (3) Appraisal - subjective assessment of distress, and (4) Regulation - regulation efforts to lessen distress The scale's scores, which range from 15 to 75, have strong test-retest reliability, discriminant validity, and internal consistency. The scale was converted into Telugu for this investigation. This instrument has been used in the Indian population.[5]

Morisky Medication Adherence Scale: The MMAS-8, is a self-reporting instrument that is frequently used in studies to assess medication adherence. Each question contains a 'yes' or' no' response choice, and scores range from 0 to 1. Each question aims to gauge the respondent's particular adherence behaviour. Scores between 6 and 8 suggest high adherence, whereas scores between 6 and 8 indicate low adherence. With a Cronbach's alpha of 0.83, the sensitivity and specificity are 93 and 53 percent, respectively.[21] This study made use of a Telugu translation. Version 16 of SPSS was used to conduct the data analysis. Descriptive statistics were used to express the demographic and clinical traits. Multiple linear regression analysis was performed to determine the link between the severity of abuse and the scores on the subscales of distress tolerance and various severity of burden. The Kruskal-Wallis H test was used to investigate the group difference between three or more variables. For all tests, the level of statistical significance was maintained at < 0.05.

RESULTS

The majority of participants were employed, from lower socioeconomic position, Hindus, married, with rural origin, and had mood disorders (Table 1). The majority of individuals omitted information about childhood abuse, substance use in the family, and mental illness in the family.

Age and sickness duration were both on the average 37 years old in our group. Table 2 displays the results from the CAS, DTS, and MMAS tests.

A substantial negative connection of the CAS score with the Tolerance subscale (p=0.001) and a positive association with the Absorption subscale (p=0.014) were found in the linear regression analysis between the CAS score and the subscales of the DTS (R2 =0.179, F=5.175, p=0.001) (Table 3).

Table 1: Demographic and clinical characteristics

-	Variables	n=%
Occupation	Unemployed	35
SES	Low	62
	Middle	38
Religion	Hindu	91
	Muslim	9
Marital status	Single	10
Residence	Rural	68
Family type	Nuclear	85
	Joint	15
Diagnosis	F10	3
	F20	4
	F30	82
	F40	11
Substance use in family	Yes	21
Childhood abuse	Yes	5
Family history of mental illness	Yes	10

Table 2: Demographic and clinical characteristics

-	Minimum	Maximum	Mean(SD)
Age	14.00	61.00	37.02(9.37)
Education	1.00	5.00	2.02(1.00)
Age at onset	1.00	54.00	32.45(9.28)
Duration of illness	1.00	25.00	4.91(4.07)
CAS score	0.00	92.00	20.33(20.55)
DTS score	4.00	51.00	26.80(12.07)
MMAS score	1.00	8.00	5.84(1.66)

Table 3: Multiple regression analysis with scores on DTS subscales as independent variables

Unstandardized coefficients	Unstandardized Coefficients		Standardised coefficients	Sig.	t
	B	Std.error	Beta		
(Constant)	15.605	4.870		3.204	0.002
Tolerance	-4.447	1.294	-0.557	-3.437	0.001
Absorption	4.522	1.808	0.591	2.501	0.014
Appraisal	0.231	0.785	0.057	0.294	0.770
Regulation	0.664	1.254	0.092	0.530	0.598

(a) Predictors: Regulation, Tolerance, Appraisal, Absorption (b) Dependent Variable: CAS Score (c) R2 =0.179, F=5.175, p=0.001

Using the Kruskal Wallis H Test, statistically no significant association was observed between CAS and MMAS score or between DTS and MMAS score (tables 4 and 5, respectively).

DISCUSSION

Demographic characteristics in this study were similar to other reports from the centre. Some variables such as low socioeconomic status, rural background and duration of illness more than 4 years are known to be associated with domestic abuse 5, while there were other clinical variables such as low substance use in family and nil child abuse which were associated with low domestic violence.[22] However mean score of 20.33 (SD±20.55) on CAS indicates an overall high level of abuse in this study compared to those reported in general population (Mean=3.3, SD=3.3).[23]

High levels of distress tolerance have been observed in India, where they have been linked to familial drug use history, a history of past treatment for ongoing psychiatric disease, and treatment knowledge. Higher distress tolerance has been attributed to Indian culture.[17] Indian women employ a variety of coping mechanisms, including meditation, yoga, exercise, journaling, prayer, time spent with family and friends, reading, going on trips, and listening to music[24], among others.

In this investigation, we discovered a statistically significant correlation between the CAS score and the DTS Tolerance (negative) and Absorption (positive) subscales.

The degree of the abuse determines one's tolerance for it. In the Indian setting, psychological abuse of women is to some extent accepted. Tolerance may, however, decline dramatically if the threshold has been passed. So, while higher amounts of abuse are deemed inappropriate and result in low distress tolerance, smaller degrees of abuse may be more tolerable. This is in line with our finding that this study had a high level of distress tolerance. Another explanation is that abusers deplete their capacity for toleration, and severe abuse may be linked to reduced levels of distress tolerance.

In line with our prediction, we discovered a favourable correlation between the abuse and absorption subscales of DTS. Greater abuse results in more attention being used and alterations in cognition.[25] Individual differences in distress tolerance are influenced by how people approach or avoid potentially upsetting events, their coping mechanisms, their propensity to focus on or try to avoid attending to upsetting aspects of situations, and how they interpret those situations differently. Behavioral, experiential, and physiological reactions to abuse must all be modulated, and each one can rise or decrease depending on how tolerable the distress is. One's ability to tolerate psychological discomfort may thus influence both types of strategies one uses to manage affect as well as moderating affective regulatory functions on behaviour.[11]

Table 4: Relationship between abuse and medication adherence (Kruskal Wallis test).

-	MMAS score	n	Mean rank	Chi-square	df	p
CAS score	Poor	29	47.78	-	-	-
-	Moderate	69	51.38	0.514	2	0.773
	Good	2	59.50	-	-	-

Table 5: Relationship between distress tolerance and medication adherence (Kruskal Wallis test).

	MMAS score	n	Mean Rank	Chi-Square	df	p
DTS score	Poor	29	45.57	-	-	-
	Moderate	69	53.03	1.955	2	0.376
	Good	2	34.75	-	-	-

Our hypothesis suggested that adherence was negatively correlated with abuse and positively correlated with distress tolerance, however this was not supported by the data. This shows that having experienced abuse does not aid in the development of adaptive coping mechanisms and that the effects are lessened by having strong resilience. An earlier study found that abuse had a negative correlation with adherence, although HIV patients' resilience helped them do so.[26,27] According to Freire de Medeiros et al., adherence and resilience are positively correlated in hemodialysis patients.[28] Possible explanations include the fact that prior studies' research demographics, disease severity, and quantity and type of abuse varied. Between wealthy and developing nations, a variation in adherence has been noted.[29] The majority of studies were carried out in Western nations,[15,18] and socio-demographic characteristics may differently impact adherence behavior[30] due to the complexity of adherence.

Based on the study's findings, it can be said that women with mental illnesses experience a high level of domestic abuse and have a higher threshold for distress. Domestic abuse severity is positively correlated with levels of attention being taken up by unpleasant emotions and negatively correlated with perceived ability to withstand emotional

suffering. Due to the cross-sectional methodology and small sample size of our study, additional replication research involving studies with larger samples and control groups is required.

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Review Article

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A Study on Effects of Drug Addiction on Families in Telangana

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Abstract

Background & objectives: A member of the family who is addicted to substances has an impact on practically every element of family life. This results in issues, challenges, or unfortunate incidents that affect the lives of family members and put a tremendous burden on family caregivers. The purpose of the current study was to evaluate the pattern of stress experienced by the family caregivers of alcohol and drug dependent individuals. A member of the family who is addicted to substances has an impact on practically every element of family life. This results in issues, challenges, or unfortunate incidents that affect the lives of family members and put a tremendous burden on family caregivers. The purpose of the current study was to evaluate the pattern of stress experienced by the family caregivers of alcohol and drug dependent individuals.

Methods: ICD 10 diagnosed substance dependency patients and their family caregivers attending a de-addiction centre at a multispecialty teaching hospital in south India were the focus of a cross-sectional study. The pattern of hardship experienced by the family caregivers of 120 men with alcohol and/or opioid dependency was evaluated using the Family Burden Interview Schedule.

Results: In comparison to the opioid and alcohol+opioid dependence groups, the alcohol dependency group was more commonly older, married, working at the time, earning more money, and having the wife care for the child. Family strain was moderate or severe in 95 to 100% of instances for "disruption of family routine," "financial stress," "disruption of family contacts," and "disruption of family leisure" in all three groups. Family burden was associated with low income and rural areas. The size of the family, the type of caregiver, as well as the caregiver's education and occupation, were not associated to it, nor were the patients' age, education, or period of dependency.

Interpretation & conclusions: The majority of caregivers (95-100%) expressed a moderate or severe burden, highlighting the severity of the situation and the necessity for additional research in this area.

Keywords: Drug addiction; Family burden; Substance dependence.

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INTRODUCTION

Background and Objectives

In India, the primary caregivers for patients, including those with mental illnesses, are their families. This has been ascribed to the interdependence of Indian culture, the concern of close family members in difficult times, as well as the lack of mental health professionals.[1] Those who look after other family members who require supervision or help due to illness or disability[2] or

those who supply unpaid care to family members with special needs[3] are considered family caregivers.

In terms of physical, emotional, and financial distress, as well as social and vocational dysfunction, an illness has a negative impact on both the person who is ill and those around them. This causes issues, challenges, or negative incidents that have an impact on the significant others' lives. This negative effect has been referred to as a burden[4] According to research[5], the family environment, namely how different family members cope with the patient's abnormal behavior, plays a significant role in determining the burden.

Although it is well acknowledged that substance misuse is a complex biopsychosocial phenomenon, substance dependency is viewed as a "family sickness."[6] S. A member of the family who is addicted to substances has an impact on practically every element of family life, including finances, social and interpersonal interactions, and leisure activities.

Substance abuse always causes more arguments, has a negative impact on family members, and costs the families. The psychological and behavioral effects on those around the substance-dependent family member are frequently far more severe. However, the study of family issues has received relatively little attention historically due to the focus on substance use as an individual issue. As a result, there is relatively little systematic study on the burden of substance abuse on family members.

The family and the family process have typically been studied almost exclusively as an etiological entity that affects the subject's substance use in research on families with substance dependent members.[7] The burden is more frequently associated with the disruptive behaviors of the substance dependent person as well as financial struggles brought on by lost income and/or money being diverted to support substance dependence.[8] Families with alcoholics are more likely to experience stressful life events, suffer from physical and psychological diseases, and need medical services more frequently.[9-13]

In a previous study[14] from India, families of 30 individuals with schizophrenia, opioid dependency, and alcohol dependence were compared. The Family Burden Interview Schedule (FBIS)[15] was used to determine the burden. Alcohol use, opioid dependency, and schizophrenia groups all showed moderately severe objective, subjective, and various domain burdens.[14] FBIS was employed in a different Indian study[16] to evaluate the burden faced by wives of males with opioid dependent syndrome. The patients were urban, between the ages of 31 and 40, and less than 12th-grade educated. On both the subjective and the objective assessment, severe burden was reported more frequently than moderate burden.[16] In 30 participants, 30 with intravenous drug use and 30 with alcohol dependency, a Nepalese study compared FBIS assessments of family hardship; the overall burden was higher with the former, and compared to other family caregivers, spouses were more tolerant and reported a lower perceived burden.[17]

The present study aims to examine the pattern of burden experienced by family caregivers of men seeking treatment for alcohol or/and opioid dependency in a de-addiction centre in south India. Alcohol and opioids are the most common substances for which treatment is sought in India.[18]

MATERIAL & METHODS

The Drug De-addiction and Treatment Centre, Department of Psychiatry, Mamata medical college, Telangana , south India, is a multispecialty teaching hospital serving in Telangana. The majority of patients are recommended by family members or themselves, while some come from other hospitals or divisions within our Institute. A group of clinical psychologists, nurses, social workers, and psychiatrists oversee the services. Outpatient, inpatient, basic laboratory, active and passive aftercare/follow-up, liaison with governmental and non-governmental organizations, and self-help groups are only a few of the services offered.

Comprehensive medical and psychosocial evaluations, including a look for physical and psychiatric co morbidities, are also part of the exams. Pharmacotherapy, psycho-behavioral therapies, and social-occupational rehabilitation are some of the treatment approaches used.

The institutional research ethics committee approved the study protocol. The data was gathered between March and May , 2022. It had a cross-sectional design. The outpatient service was used to draw the convenience sample. Both the patients and the caregivers involved in the study gave their written approval.

Family members who provided care for the patients who were seeking treatment for substance abuse made up the bulk of the sample. The family members of the patients were included in the study if they shared a home with the patients, were

directly involved in their care for their substance dependence and its treatment for more than a year, and were involved indirectly in general life care (sharing a kitchen, expenses, social obligations, and household chores including the care of children, the elderly, and the sick family members).

For the sake of comparability, the >1 year cut-off for caring was used because the vast majority of studies from India employed this cut-off.[19–22] The caregiver chosen for the study was the one who stayed together longer and participated in the patient's care more, as agreed upon by the patient, caregivers, and the treating clinician, in the event that more than one family caregiver was available. The caretakers were older than 18 years of age, of either gender, and were generally healthy.

The patients were males over the age of 18, with a diagnosis of alcohol, opioid, or alcohol+opioid dependency (40 in each group, for a total of 120 patients). The majority of them (100 subjects) were taking drugs to manage withdrawal (chlordiazepoxide/lorazepam for alcohol dependence, clonidine - NSAID - nitrazepam combinations for opiate dependence), while others (20 subjects) were taking drugs to reduce cravings or act as a deterrent (naltrexone for opiates and disulfiram, acamprosate, topiramate, or naltrexone for alcohol). If the patients or their carers had any severe physical sickness, organic brain condition, or mental impairment, they were disqualified from the study. From the patients, the caregivers, and the case notes if necessary, pertinent demographic and clinical information for the patients and the caregivers was gathered. The family burden interview schedule (FBIS)[15] was used to rate the selected family carers. Financial burden, disruption of family everyday activities, disruption of family leisure, disruption of family connection, impact on others' physical and mental health are the six topics covered by the FBIS, a semi-structured interview schedule. Each of its 24 items is scored on a 3-point scale (mild, moderate, severe). All items have an inter-rater reliability of 0.78 and a co relational validity of 0.72. There is also a question to gauge the overall subjective burden. The difference between the objective and subjective burdens is a reflection of the fact that many family members may be more or less tolerant and may downplay or exaggerate their issues. With the families of patients with mental retardation, chronic physical conditions, alcohol use, and schizophrenia, affective, and neurotic disorders, the measure has been utilized extensively in India.[19–22]

STATISTICAL ANALYSIS

SPSS version 14.0 for Windows (Chicago, Illinois, USA) was used to analyze the data. The frequency, percentage, mean, standard deviation, ANOVA, and post-hoc analysis with Bonferroni's correction were used to assess the descriptive data. Demographic and clinical factors were compared between the drug groups as well as the moderate vs. severe burden groups, with the continuous normally distributed variables using independent t test and the discrete variables by chi-square test. To identify the variables that are associated with either a severe objective or subjective family burden, binomial logistic regression analysis was utilized.

RESULTS

Patients Demographics: Compared to the opioid dependence and alcohol+opioid dependence groups, the alcohol dependence group was older (44.72 8.95 yr vs. 28.12 7.06 and 32.15 9.13 yr, respectively, P0.01), more often working (82.5 vs. 47.5 and 37.5, respectively, P0.01), with income of'>6000 per month (67.5 vs. 15 and 27.5 percent, respectively, P In terms of education, religion, family size, family type, and rural versus urban location, the three groups were comparable (Table I). Patients with alcohol dependence were shown to be substantially older than those with opioid dependence (44.72+/- 8.95 vs. 28.12+/- 7.06 yr, P<0.001) and alcohol+opioid dependence (44.72 +/-8.95 vs. 32.15+/- 9.13 yr, P<0.001) on post-hoc analysis with Bonferroni's correction.

Clinical Profile: The alcohol dependence group's duration of substance dependence was significantly longer than that of the opioid dependence and alcohol+opioid dependence groups (P <0.01). In 64.2% of patients, the duration of dependence was greater than five years (75 vs. 60 and 57.5%) in the alcohol dependence group compared to opioid dependence and alcohol+opioid dependence groups. Sixty-five percent of patients had co-occurring nicotine and drug addiction, with opioid dependence being more common than alcohol dependence and alcohol and opioid dependence (Table I). Patients with alcohol dependency exhibited higher durations of dependence than patients with opioid dependence (12.92 +/-9.18 vs. 5.82+/- 4.39 yr, P<0.001) and patients with alcohol+opioid dependence (12.92 +/-9.18 vs. 7.6+/- 7.34 yr, P=0.004), according to a posthoc analysis using Bonferroni's correction.

17% of patients had psychiatric co morbidity, which included psychosis (N=6), depression (N=5),

bipolar and anxiety disorders (N=4 each), and personality disorder (N=2). Alcohol dependence was more common than opioid dependence and alcohol+opioid dependence. 10.8% of patients had physical co morbidity, which was more common in the alcohol dependence group (17.5%) than in the opioid dependence and alcohol+opioid dependence groups (7.5%). These conditions included seizure disorder (N=9), gout, hepatitis, and alcoholic liver disease (N=2 each), as well as diabetes mellitus, pulmonary tuberculosis, and hypertension (1 each). 57.5 percent of people had a family history of substance abuse; this was more common in the alcohol dependence and alcohol+opioid dependence groups than in the opioid dependence group (P< 0.05). (Table I).

Table 1: Socio-demographic and clinical profile of patients

Variable	Total (N=120)	Alcohol (N=40)	Opioid (N=40)	Alcohol+ opioid (N=40)	P value
Age(years)	35+10.97	44.72+8.95	28.12+7.06	32.15+9.13	<0.01
Duration of dependence	8.78+7.79	12.92+9.18	5.82+4.39	7.6+7.34	<0.01
Marital Status					
Single	37(30.8)	1(2.5)	21(52.5)	15(37.5)	
Married	82(68.3)	38(95)	19(47.5)	25(62.5)	<0.01
Divorced	1(0.083)	1(2.5)	0	0	
Occupation					
Working	67(55.8)	33(82.5)	19(47.5)	15(37.5)	<0.01
Unemployed	53(44.2)	7(17.5)	21(52.5)	25(62.5)	
Education Status					
Illiterate	1(0.083)	0	1(2.5)	0	
1-5yrs	15(12.5)	7(17.5)	4(10)	4(10)	NS
6-10yrs	38(31.7)	12(30)	13(32.5)	13(32.5)	
>11yrs	66(55)	21(52.5)	22(55)	23(57.5)	
Monthly Income (Rs)					
Nil	54(45)	5(12.5)	22(55)	27(67.5)	
Upto 2500rs	6(5)	2(5)	4(10)	0	<0.001
2500-6000rs	16(13.3)	6(12.5)	8(20)	2(5)	
>6000rs	44(36.6)	27(67.5)	6(15)	11(27.5)	
Religion					
Hindu	58(48.3)	22(55)	22(55)	14(35)	
Muslim	58(48.3)	16(40)	17(42.5)	25(625)	NS
Others	4(3.3)	2(5)	1(2.5)	1(2.5)	
Family Type					
Nuclear	66(55)	23(57.7)	23(57.5)	20(50)	
Extended	39(32.5)	13(32.5)	12(30)	14(35)	NS
Joint	15(12.5)	4(10)	5(12.5)	6(15)	
Family Size					
<6 members	79(65.8)	25(62.5)	27(67.5)	27(67.5)	NS
>6 members	41(34.2)	15(37.5)	13(32.5)	13(32.5)	
Locality					
Urban	81(67.5)	28(70)	29(72.5)	24(60)	NS
Rural	39(32.5)	12(30)	11(27.5)	16(40)	
Nicotin dependence -present	78(65)	24(60)	29(72.5)	25(62.5)	NS
Psychiatric comorbidity -present	22(18.3)	10(25)	5(12.5)	7(17.5)	NS
Physical comorbidity -present	13(10.8)	7(17.5)	3(7.5)	3(7.5)	NS
Family history of substance dependence	69(57.7)	28(70)	16(40)	25(62.5)	<0.05

NS: Not significant, values in parentheses are percentages

The average age and level of education of caregivers were, respectively, 43.8+/- 12.4 and 10.42 +/-3.91 years. The proportion of caregivers who were wives was greater in the alcohol dependence group compared to the opioid dependence and alcohol+opioid dependence groups (P <0.01). In terms of age, education, and occupation, the family caregivers of the three substance dependent groups were comparable (Table II).

Table 2: Demographic profile of caregivers

Variable	Total (N=120)	Alcohol (N=40)	Opioid (N=40)	Alcohol + opioid (N=40)	P value
Age(yr)	43.85+12.4	41.17+10.65	47.3+13.15	43.07+12.74	NS
Education (yr)	10.42+3.91	10.77+4.44	10.27+3.35	10.22+3.95	NS
Relationship with patient					
Wife	59(49.1)	31(77.5)	11(27.5)	17(42.5)	<0.01
Father	29(24.1)	2(5)	15(37.5)	12(30)	
Mother	18(15)	1(2.5)	12(30)	5(12.5)	
Son	7(5.8)	4(10)	1(2.5)	2(5)	
Brother	7(5.8)	2(5)	1(2.5)	4(10)	
Occupation					
Working	46(38.3)	13(32.5)	15(37.5)	18(45)	NS
Unemployed	74(61.7)	27(67.5)	25(62.5)	22(55)	

NS: Not significant, values in parentheses are percentages

Burden: Across the three groups, the overall intensity of the caregivers' subjective and objective burden was largely similar, with most caregivers reporting either a moderate (52.5%) or severe (45.8%) level of burden, and very seldom none at all (1.7%). With the exception of the disruption of family leisure, which was reported as severe more frequently in the alcohol+opioid dependence group than in the alcohol dependence or opioid dependence groups (17.5 vs. 2.5% in the other groups) (P=0.01), the severity profile for the various areas of burden under consideration was similar across the three groups (Table III).

Table 3: Family Burden With Substance Dependence

Variable	Total(N=120)	Alcohol (N=40)	Opioid (N=40)	Alcohol+ opioid (N=40)	P value
Objective burden					
No	2(1.7)	2(5)	0	0	
Moderate	63(52.5)	22(55)	22(55)	19(47.5)	NS
Severe	55(45.8)	16(40)	18(45)	21(52.5)	
Subjective burden					
No	2(1.7)	2(5)	0	0	
Moderate	63(52.5)	24(60)	22(55)	19(47.5)	NS
Severe	55(45.8)	14(35)	18(45)	21(52.5)	
Areas of financial burden					
No	4(3.33)	4(10)	0	0	
Moderate	107(89.17)	34(85)	37(92.5)	36(90)	NS
Severe	9(7.5)	2(5)	3(7.5)	4(10)	
Disruption of family routine					
No	5(4.17)	4(10)	1(2.5)	0	
Moderate	65(54.17)	20(50)	22(55)	23(57.5)	NS
Severe	50(41.67)	16(40)	17(42.5)	17(42.5)	
Disruption of family leisure					
No	6(5)	5(12.5)	1(2.5)	0	
Moderate	105(87.5)	34(85)	38(95)	33(82.5)	NS
Severe	9(7.5)	1(2.5)	1(2.5)	7(17.5)	

Disruption of family interaction					
No	6(5)	5(12.5)	1(2.5)	0	
Moderate	96(80)	30(75)	33(82.5)	33(82.5)	NS
Severe	18(15)	5(12.5)	6(15)	7(17.5)	
Effect on physical health of family members					
No	83(69.17)	28(70)	32(80)	23(57.5)	
Moderate	37(30.83)	12(30)	8(20)	17(42.5)	NS
Severe	0	0	0	0	
Effect on mental health of family members					
No	39(32.5)	15(37.5)	9(22.5)	15(37.5)	
Moderate	80(66.6)	25(62.5)	30(75)	25(62.5)	NS
Severe	1(0.83)	0	1(2.5)	0	

NS: Not significant, values in parentheses are percentages

Except for the categories of "disruption of family leisure" and "impact on physical health of family members," where the alcohol+opioids dependence group had higher scores (P<0.05), the burden severity scores were equal across the three groups. For the length of drug dependency of< 5 vs. >5 yr and as reported by wives vs. other carers, the differences were not significant for both the objective and subjective burden.

When the demographic and clinical characteristics of patients (N=120) with severe vs. moderate subjective or objective burden were evaluated, more rural subjects than urban subjects (61.53 vs. 39.24%, P<0.05) reported experiencing severe subjective burden. When similar comparisons were made for different types of burden, it was found that unemployed subjects had significantly higher burden than employed subjects in the areas of financial burden (13.20 vs. 2.98, P<0.05), disruption of family routine (54.71 vs. 31.34 %, P<0.05), and disruption of family interaction (20.75 vs. 10.44%, P<0.05). In comparison to urban respondents, a higher percentage of rural subjects (42.59 vs. 24.62%, P=0.05) reported a moderate-to-severe burden on the influence on the physical health of family members.

The association between independent factors (demographic and clinical characteristics) that were more frequently present in people with severe burden was investigated using a simple binary logistic regression analysis with entry technique. With an odds ratio of 2.47 (CI=1.12-5.44, P<0.05) and the only significant predictor of severe subjective load being living in a rural area. Other factors like marital status, employment position, family structure, length of dependency, the existence of psychiatric or physical illness, and family history were not found to be significant predictors of severe subjective burden.

DISCUSSION

The functioning of the family and society are affected by substance abuse, and families of addicts bear a heavy weight of care. The profile of the linked components, which can both affect the problem's outcome and be helpful in devising and planning interventions to help the families manage with substance dependency, gives the study of family burden in substance dependence value.

In India, the joint family is the typical type of family. It is a household with multiple family subunits residing in various rooms throughout the same home.[24] Given that joint families are a more typical family structure, the family burden associated with substance dependence is crucial for India and other emerging nations. Additionally, it gains increasing relevance given the necessity of emphasizing the creation of community mental health services under the umbrella of primary healthcare and community involvement.[25] The objective is to address the requirements of both caregivers and patients, with a particular emphasis on patient care. The employment of a similar strategy has been successful in treating various mental conditions, including schizophrenia.[26]

Our sample's demographic and clinical characteristics were broadly consistent with those published in past research from other centre.[14,27] However, our opioid dependence group being more educated, more unemployed, and having fewer urban individuals in our study compared to a study from another centre in north India16 may be due to the other center's location in a large city. Our alcoholism group, however, resembled a Nepalese study 17 with more urban participants and more women serving as caregivers.

Given that all of our patients were staying with

their families, it was not surprising to find that the most common sources of stress were "disruption of family routine," "interactions," or "leisure." It is widely acknowledged that a psychiatric condition has the greatest effect on the family and frequently causes a full breakdown in the family's functioning.[8] Additionally, it seems sense that financial burdens are the most frequently cited burden, according to our research. Both substance misuse and psychiatric disease are expensive disorders to have globally. Particularly when it comes to substance abuse, a lot of money is spent on getting and using the drugs, dealing with the negative effects like accidents and crime, and seeking treatment by travelling to treatment facilities, paying for healers, including faith healers, and purchasing goods and services.[8]

In our study, participants with low income and those living in rural areas had higher objective and subjective burdens. Rural areas always have fewer employment and income opportunities. In terms of finances, disruption of routine and interaction within the family, as well as family members' mental health, the low income group was more burdened. Singles experienced greater disruption of family interaction, whereas subjects in opioid groups and extended families experienced significant disruption of family leisure. The subject's decision to remain single and his family caregiver's perception of a heavier load could both be related to more disruption of family interaction. Rural patients Staying in extended families with a higher risk of substance abuse or family history demonstrates the interaction between the family environment and its effects on the health of the family members.

In contrast to an earlier study from other centre that found married participants to be more burdened, particularly among the areas of finances, disruption of family routine, and consequences on mental and physical health[14], we discovered higher disruption of family leisure in singles. In contrast to the current study, the previous one found no evidence of a connection between increased burden and severe reliance. The rural population was also found to be more financially strained, and married, elderly, and female carers were found to report higher disturbance of family leisure time.[14]

Our study has a number of drawbacks. The results could not be extrapolated to other treatment facilities due to the small sample size and recruitment from a tertiary care facility. All of the patients were men, as was typical for our center. All data for the cross-sectional, non-blind burden assessments came from a single family caregiver. Numerous factors, including coping, appraisal, stated emotions, and social support, were not evaluated because the assessment of subjective burden was conducted globally. In order to better understand the precise impacts of substances and other mediators like family type, coping, and social support on the family load, future research should be undertaken in a large sample with prospective design.

In conclusion, our study shown that substance abuse was linked to significant burdens for the family members, more so for the alcohol+opioid dependency group than the opioid dependence group, and more so for both subjective and objective burdens in rural areas with low income. These results can offer recommendations for future directions for study in this field.

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