PSYCHIATRIC WELLNESS IN GERIATRIC POPULATION OF JAIPUR CITY: AN EMERGING CHALLENGE

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ABSTRACT:
Background& Objectives: *Stress is a side effect of development and stress ultimately leads to mental ill health and the worst affected group is elderly. India is a developing country and mental illnesses are also on a rise. Present study aims to find out psychiatric wellness and its associated factors in geriatric population of Jaipur City.*
Methods: *A community bases survey was conducted with 30 cluster technique to identify houses with elderly (≥60 years) in Municipal Corporation area of Jaipur City. Semi-structured pro-forma was used to collect data. Modified Mini Screen (MMS) was used to identify psycho-wellness in elderly. Data were expressed in percentage and proportions and inferred by Chi-square test.*
Interpretation & Conclusions: *A quantifiable number (24.24%) of elderly was in either orange or red zone of psycho-wellness. With increasing age, proportion of elderly people were significantly (P<0.05) increasing in orange or red zone. Widows and widowers were found significantly (P<0.05) more affected as compared to married elderly living with their spouses. Not earning elderly were also more affected than those who were earning. Sex, caste, education, skill of occupation, socio-economic condition, housing conditions and type of family of elderly was not found to be associated with Psycho-wellness in elderly (P>0.05). So it can be concluded from study that about one fourth of the elderly had some diagnosable mental ailment. Mental ill health increases with increasing age. Widows/widower/divorcees/separated spouses also have more chances of mental illness.*

Keywords: *Elderly, Modifies Mini Screen (MMS), Psychiatric wellness, Psychiatric morbidity*

INTRODUCTION

Geriatric population i.e. aged 60 years and above is expected to constitute 10.2% of the total world population. In India it is estimated 18.4% of the total population by the year 2025[1].Social and economic conditions, such as poverty, break up of joint families and poor services to the elderly, pose a psychiatric threat to them. Emergence of nuclear families, increased cost of living, and change in priorities of a family has adversely affected the elderly in India. Functional dependency is common among elderly people and many would need assistance in their activities of daily living. Psychiatric morbidity, which increases with age, is more prevalent in the geriatric (43.32%) than in the non-geriatric group (4.66%).[2]

Percentage of the elderly population has increased worldwide and this trend is expected to continue. If not properly addressed, this demographic phenomenon will lead to social and economic problems, due to the associated high risk of disability and morbidity and the need for medical services among the elderly. In 1980 the United Nations defined 60 years as the age of transition to the elderly segment of the population.[3]

Proportion of elderly persons has increased from 5.43% in 1951 to 7.08% in 2001 and 8.58% in 2011 and projected to 9.87% in 2021.National average for 60-69 years, 70-79 years and 80 years & above 61.74%, 27.39% and 10.87% respectivly[4].

MATERIALS AND METHODS

Present community based descriptive observational study was conducted on elderly population in year 2014 within the municipal corporation limits of Jaipur city of Rajasthan.

Sample size was calculated 490 individuals of 60 years and above at confidence limit 95% and allowable error 15% assuming 26.7% elderly population. As this study was conducted by 30 cluster technique so sample size was made double i.e. 990 elderly individual.[5]

Calculation of Sample Size:

$$\text{Sample Size} = \frac{4PQ}{L^2} = \frac{4 \times 26.7 \times 73.3}{4 \times 4} = 490$$

Estimated sample size =
$$490 \times D = 490 \times 2 = 980 \approx 990$$

Here, P=Prevalence (26.7%), Q= 1-PL= Error (15% of P) and Design effect (D) = 2

Thus 33 eligible elderly were identified from each of 30 clusters to cover whole of municipal corporation limits of Jaipur city. To select eligible elderly house to house survey was conducted after selecting the landmark randomly from all the landmark of the cluster. Eligibility of elderly was determined by age 60 years and above who has given written informed consent and were without any

chronic illness and able to communicate. These identified elderly were interrogated and general information about their age, sex, type of family, marital status, education status, previous occupation and present occupation with economic status was recorded. Then Modified Mini Screen Scale (MMS)[6] was used to assess the psychiatric wellness. Data were analyzed and classified on MS Excel 2007. Association of Psychiatric wellness was inferred by Chi-Square Test.

RESULTS
Majority of elderly (63.45%) belonged to the age group of 60-69% years. 28.07% belonged to the age group of 70-79 years while 8.48% were aged 80 years or above and overall M:F ratio was found 1048 females per 1000 males. These studied elderly were predominated in Hindus of general caste. (Table 1)

Table 1: Age and Sex wise Distribution of Study Population

S. No	Age Group	Sex		Study Population	
		Male	Female	Number	%
1	**60 – 69**	285	342	628	63.45
2	**70 – 79**	164	115	278	28.07
3	80-Above	45	39	84	8.48
	Total	494	496	990	100

Although majorities i.e. 750 (75.76%) of these 990 elderly were in green zone of Psycho-wellness but a quantifiable number of elderly were in either orange or red zone (24.24%) i.e. 221 (22.33%) in orange and 19 (1.91%) in red zone.(Fig 1) This study observed that with increasing age proportion of elderly people were increasing in orange or red zone (p<0.001) of Psychiatric wellness (Fig 2).

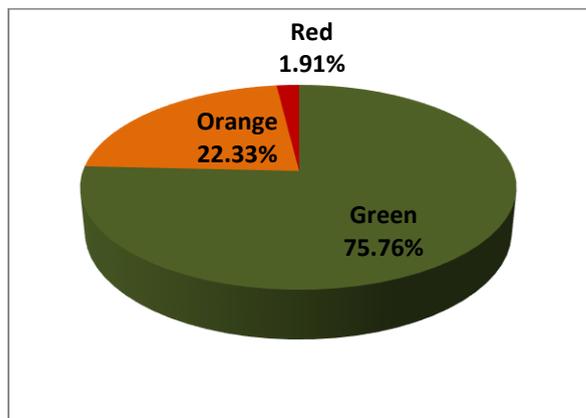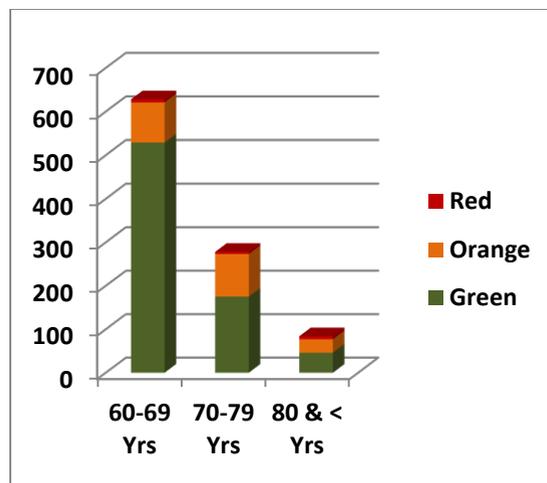**Fig. 1**

Fig. 2

Religion was also found to be associated with psycho-wellness (p<0.001); proportion of Muslims were worse affected followed by Hindus, Christians and Sikhs. It was also revealed from this study that all single elderly persons (6 out of 6) were in green zone and in orange and red zone widows /widowers were higher than married(living with their spouses) elderly people (p<0.001). This study also depict that psychiatric wellness was associated with their occupation (p=0.002). In orange and red zone proportion of not earning elderly people were more than other three occupational categories (Fig 3). SES was also found to be associated with psychiatric wellness (p=0.01) with maximum proportion of upper class was in red zone whereas maximum proportion of elderly of upper-lower class was in green zone (Fig 4).

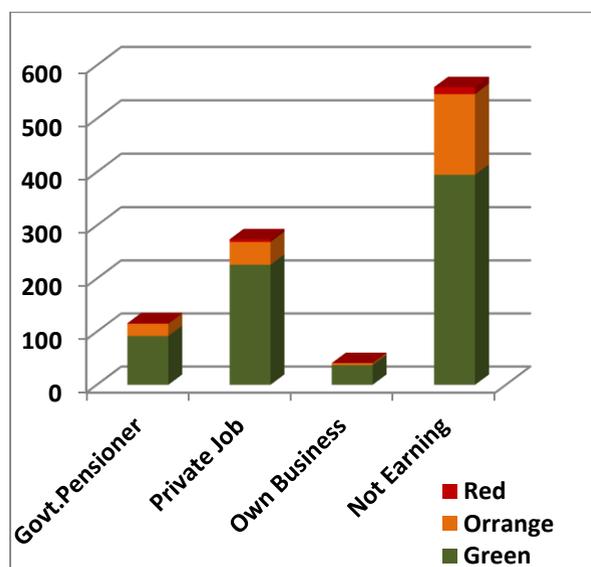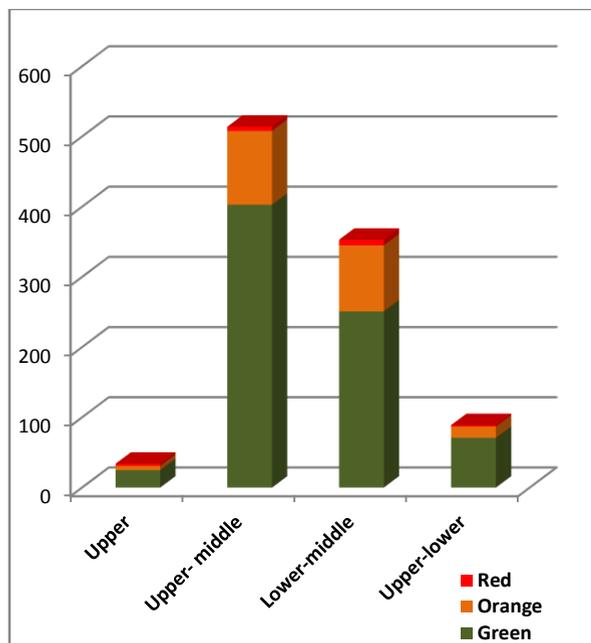**Fig. 3**

Fig. 4

Elderly with good personal hygiene were less prone to fall in orange and red zone although it was not found significant (p>0.05). (Table 2)

Sex, caste, education, skill of occupation, housing conditions and type of family of elderly were not found to be associated with Psycho-wellness in elderly. (Table 2)

Table 2: Association of variables with Psycho wellness

S. No.	Variables	Chi-square Test	P Value	LS	Association
1.	Age	82.393 with 4 DF	<0.001	S	Yes
2.	Sex	0.857 with 2 DF	0.651	NS	No
3.	Religion	22.340 with 6 DF	0.001	S	Yes
4.	Caste	5.467 with 6 DF	0.485	NS	No
5.	Marital Status	24.666 with 4 DF	0.001	S	Yes
6.	Education	18.012 with 12 DF	0.115	NS	No
7.	Present Occupation	20.962 with 6 DF	0.002	S	Yes
8.	Type of Skill of Previous Occupation	14.963 with 8 DF	0.060	NS	No
9.	*Socio-economic Status	16.771 with 6 DF	0.010	S	Yes
10.	Type of Family	7.005 with 4 DF	0.136	NS	No
11.	Housing Condition	3.253 with 4 DF	0.516	NS	No
12.	Personal Hygiene	18.738 with 4 DF	0.001	HS	Yes

*Socio-economic Status as per modified Kupuswami scale[4]

DISCUSSION

The present study observed that a about one fourth of elderly together were in either orange or red zone (24.24%). According to Seby K et al (2011)[7]the overall prevalence of psychiatric morbidity in the geriatric population was 26.7% which was quite similar with these observations.

Present study observed that majority of the elderly (63.45%) belonged to 60-69 years followed by 28.07% in the age group of 70-79 years and 8.48% in age group of 80 years and above which are quite similar to the National data for the corresponding age group which were 61.74%, 27.39% and 10.87 % respectively (census 2011)[4]. When psycho wellness of elderly were concerned, present study revealed that elderly with increasing age were gradually falling into orange or red zone. There is a sharp increase after 69 years in the orange zone(14.65% to 35.25%) while in the red zone same increase is seen after 79 years(i.e. 1.80% to 8.34%). This difference in proportion of elderly in various zones as per age was found significant (p<0.001). In contrast to this S C Tiwari et al (2014)[8] observed maximum prevalence(12.2%) among the "young old" (60-69 years) followed by the "old old" (10.8%), "oldest old" (10.8%) and "pre-elderly" (9.4%). But in resonance with present study observations, Seby K et al (2011)[7] also observed a trend of increase in the prevalence of psychiatric disorders with increasing age, although this was not statistically significant. Purna Singh et al (2012)[9] also reported that the age group of >80 years has more prevalence of psychiatric disorders (44%), followed by those who are in the age groups of 60 to 69 years (33.3%) and then 70 to 79 years (28.9%).

Sex ratio in the study was observed almost equal which was almost similar to observation made by Seby et al (2011)[7]Present study also showed that there was no statistically significant (p>0.05) difference between the two sexes in all the three categories of psychiatric wellness zones. Almost similar observation were made by Nandi P S et al (1997)[10], Reddy MV et al (1998)[9] and Purna Singh et al (2012)[9].

Maximum elderly of study population were married and living with spouse (83.73%) but widows/widowers and single elderly were15.66% and 0.61%respectively. The present study observed that all unmarried elderly persons were in green zone. In orange and red zone widows /widowers were higher than married elderly people. This difference in distribution of proportion in various psycho-wellness zones as per marital status was found significant (p<0.001). Well comparable findings were of Seby K et al (2011)[7] Reddy M V et al (1998)[11] also found that widowers/widows had significantly higher prevalence of psychiatric illness than those of married, married people had significantly higher prevalence then those of singles.

About half of study elderly were illiterates (44.65%). Literacy level of the sample population was quite low in spite of the fact that this study was done in the state capital. Well comparable observations were made by other authors like P R Moharana et al (2008)[12] who found 78% elderly were literate, Sengupta D K et al (1982)[13] found 77.3% literate. The present study showed that psycho-morbidity (red and orange zone elderly) was slightly more in illiterates and just literates (i.e. 28.96% and 35.71 % respectively) than elderly of other educational class but it was not found significant (p=0.115). Almost similar observations were made by Purna Singh et al (2012)[7] who reported that psychiatric disorders were more prevalent in illiterate population (37.8%), when compared with the literate people (30.5%).

Present occupation of study population showed that more than half of were not earning. P R Moharana et al (2008)[12] and Prakash et al (1997)[14] had well comparable observations. And if type of skill of past occupation is revealed, it showed that majority of elderly had unskilled occupation (78.38%). Comparable observations were made by Prakash Boraligaiyah et al (2012)[15] who reported that 68.8% of respondents were unemployed, followed by 16.2% unskilled workers, 5.9% semiskilled workers, 5.7% semi-professional, 3.4% skilled workers and none of the elderly belonged to professional category.

The present study also revealed that in green zone elderly people with own business were in majority followed by government pensioners, private job holders and not earning (70.66%) elderly people. In orange and red zone, not earning elderly people were more than another three occupational categories. This difference in variation in proportion was found significant (p=0.002). Reddy et al (1998)[11] also found that the lowest prevalence was among businessmen followed by professionals. So it can be concluded that those elderly who were earning were healthier than those who were not earning.

The present study also showed that there was no significant difference in population of elderly in Green and Orange zone as per SES. But in Red zone maximum elderly were in upper class (8.82%) and there was no significant difference in population of elderly in other three SE classes (Modified Kuppuswamy′s SES scale). In contrast to this Tiwari et al (2013)[16] reported that (according to Stantardized SES scale 2005)prevalence of psychiatric morbidity amongst elderly belonging to lower SES (13.6%) was found to be higher than middle SES (9.9%).

The present study showed that maximum elderly were from joint families (94.65%). Other studies like Charan Singh et al (1995)[17], Padda A S et al (1998)[18] and Bhatia V et al (2003)[19]also found that more than 60% of elderly lived in joint families.

The present study also observed that although proportion of elderly persons in orange and red zones were decreasing from 85.42% of nuclear family to 40% of extended families and from nuclear family and none from extended family was in red zone but this difference in distribution of proportion was not found significant (p=0.136). Reddy MV et al (1998)[11] also found higher psychiatric morbidity in elderly of nuclear families than of joint families.

The present study observed that distribution of proportion of elderly persons in various psycho-wellness zones as per personal hygiene was found with significant variation (p<0.001). Elderly with good personal hygiene were less prone to fall in orange and red zone whereas elderly with poor or fair personal hygiene were more prone to fall in orange or red zones. This association of personal hygiene with psych wellness of elderly may be because of careless attitude due to psychiatric illness. This can also because of the reason that economic independence is associated with good personal hygiene.

CONCLUSIONS

About one fourth of geriatric population (elderly) were in either orange or red zone, which was found to be associated with age, religion, marital status, type of occupation and SES. Psycho wellness of elderly was not well in elderly age group, Muslims, widow/widowers middle socio-economic status and not earning elderly. However Sex, caste, education, skill of occupation, housing conditions personal hygiene and type of family of elderly was not found to be associated with Psycho-wellness in elderly.

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