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Research Article

A STUDY ON MORBIDITY PROFILE AND QUALITY OF LIFE OF INMATES IN OLD AGE HOMES IN UDUPI DISTRICT, KARNATAKA, INDIA

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ABSTRACT
Aging is a normal biological phenomenon. There is rapid increase in elderly population due to decrease in mortality rate and fertility rate by the consequence of better medical and health care facilities. The elderly population experiences social isolation due to breakage of various bonds like work relationship, loss of relatives and friends, movement of children away from them for jobs. The situation worsens when aged suffer with chronic diseases; lose their physical capabilities and financial insecurity. Our objective was to assess the overall quality of life of elderly population residing in old age homes. A descriptive cross sectional study was carried out for duration of three months from August to November 2011 to assess the socio-demographic profile, morbidity pattern and quality of life of inmates in old age homes. A pre-structured and pre-tested questionnaire was used for data collection on socio-demographic status and morbidity pattern, and WHOQOL-BREF Scale for accessing quality of life. The study included five old age homes namely Shri Krishna old age home, Sansthan old age home, Chaitanya old age home, Ozanum old age home and Karunalaya old age home in Udupi district. The study included 90 participants from above mentioned old age homes by complete enumeration method. Oral consent was obtained from the study participants before interviewing them. The mean age of inmates was found to be 76.39±7.91 years. Out of 90 inmates, 74.44% were female. The result also showed majority (80%) of inmates were literate. The most prevalent morbidities were hypertension and diabetes with the distribution of 47.8% and 43.5% among males, and 43.3% and 34.3% among females respectively. The respondents showed highest quality of life score (60.47±10.14) in environmental domain and least score (34.66±14.88) in social relationship domain which reflected the good environmental condition at old age homes but there is a need to address the issue of social negligence of elderly from family and society. The study concluded that organisational care and support is essential for health and wellbeing of elderly. To improve quality of life in elderly, emphasis should be given on the development of social relationship and self belief restoration by counselling.

Key Words: *Quality of Life, Old Age Home, WHOQOL-BREF*

INTRODUCTION
The world experienced rapid expansion of elderly population in last century. The advancement in medical sciences has increased life expectancy of individual by providing quality healthcare and better nutrition. According to WHO, the world's population of people 60 years of age and older has doubled since 1980 and is forecast to reach 2 billion by 2050 (World Health Organization, 2012). Population ageing is occurring in parallel with rapid urbanization and globalisation.
India is witnessing a rapid increment in aged population constituting 8.2% of the national population. As the share and size of elderly population is increasing over time, it is estimated that elderly population is projected to rise from 5.6% in 1961 to 12.4% by year 2026 (Jeyalakshmi, Chakrabarti and Gupta, 2011)
In Karnataka, the estimated elderly population was 3,837,000 in 2001 and projected to be 9,681,000 by 2026 (Census of India, 2001). Urbanization, modernization and globalization have changed the traditional concept of family in India, which was to provide social support to ill, dependent and older family

members (Kumar, Das and Rautela, 2012). Over the years, urbanization has lead to change in the economic structure, diminishing societal values, weakening the importance of joint family. In this changing scenario, the younger generation is searching for new identity with economic and social independence. As a consequence of which the older generation is caught between the decline in traditional values, and absence to adequate social security (Dubey, Bhasin, Gupta and Sharma, 2011). In this dynamic era, where the aging of population rapidly increasing in one hand and the erosion of joint family traditional practice and social values occurring on the other hand, the old age homes concept prove to be helpful for elderly. Presently, there are 1018 geriatric homes in India. Out of which, 427 homes are free of cost while 153 are on payment and stay basis, 146 homes have both free as well as pay and stay facilities and detailed information is not available for 292 homes [Banker, Prajapati and Kedia, 2011). About 52% of total old age homes in country confined to only four states namely Kerala, Tamil Nadu, Karnataka and Andhra Pradesh (Rajan, 2000).

The aim of this study was to assess the socio-demographic profile, morbidity pattern and quality of life of inmates in old age homes.

MATERIALS AND METHODS

A descriptive cross sectional study was conducted from 5th August to 10th November 2011 to assess the socio-demographic profile, pattern of morbidities and quality of life of elderly residing in old age homes. Total of five old age homes namely Shri Krishna old age home, Sansthan old age home, Chaitanya old age home, Ozanum old age home and Karunalaya old age home in Udupi district were approached. Oral consent was obtained from administrative body of respective old age homes. A structured questionnaire was prepared to collect information on socio-demographic characteristics and morbidity pattern. The WHOQOL-BREF scale containing 26 questions related to physical, psychological, social and environmental domain was used for the assessment of quality of life of inmates. All inmates of each old age home who gave oral consent were included in the study. Severely ill, bed ridden, audio-visually impaired, mentally retarded elderly who could not answer were not included in the study. Also those who were not willing to participate were excluded from the study. All 100 elderly residing in five old age homes were approached, out of which 10 were excluded as per exclusion criteria. Thus, data was collected only from 90 participants during the study period. The scoring of WHOQOL-BREF scale was done as per guidelines and raw scores of physical, psychological, social and environmental domains were transformed into 0-100 scale. The collected data were entered and analyzed by using SPSS version 15.0. Proportion, mean, standard deviation and standard error were calculated and reported. The association between mean score of physical, psychological, social and environmental domains of WHOQOL-BREF scale and different socio-demographic variables were examined by independent t-test and One Way ANOVA at 5% level of significance.

RESULT AND DISCUSSION

The study was conducted in the five old age homes of Udupi district. Out of total 90 respondents, 23(25.56%) were male and 67(74.44%) were female. The mean age of male and female respondents were 75.3(±8.6) and 76.8(±7.7) respectively. The majority 38(42.2%) of the total respondents were in the age group 80 and above. Most (79.9%) of the study population were literates. Similar observations were made in the study on Quality of Life and Restricted Activity Days Among the old aged conducted at the northern part of Karnataka, Hubli where 94% study participants were literates (Lokare, Nekar and Mahesh, 2011). Study showed 74 (82.2%) old age home residents belonged to Christianity. Majority 33(36.7%) of inmates were married followed by widowed (30%) and unmarried (30%). Similar distribution was seen in the study done on old age homes in Mangalore, which stated that majority of inmates were married (50.9%) followed by widowed (16.4%) and unmarried (16.4%) (Hegde, Kosgi, Rao, Pai and Mudgal, 2012). Among the 67 female participants, 43 (64.2%) were house wives and out of

Table 1: Shows socio-demographic profile of the elderly in old age homes

Age group	Gender		Total (N=90) N (%)
	Male(N=23) N (%)	Female(N=67) N (%)	
Young old (60-69)	9(39.1)	15(22.4)	24(26.7)
Old old (70-79)	6(26.1)	22(32.8)	28(31.1)
Oldest old (80 years & above)	8(34.8)	30(40.8)	38(42.2)
Total	23(25.6)	67(74.4)	90(100)
Mean age(SD)	75.3(±8.6)	76.8(±7.7)	76.4(±7.9)
Educational Level			
Illiterate	3(13)	16(23.9)	19(21.1)
Primary	2(8.7)	16(23.9)	18(20)
Higher Primary	8(34.8)	11(16.4)	19(21.1)
High School	5(21.7)	12(17.9)	17(18.9)
Intermediate	3(13)	3(4.5)	6(6.7)
Graduation & above	2(8.7)	9(13.4)	11(12.2)
Religion			
Hindu	7(30.4)	7(10.4%)	14(15.6)
Christian	16(69.6)	58(86.6)	74(82.2)
Muslim	0 (0)	2(3)	2(2.2)
Marital Status			
Married	13(56.5)	20(29.9)	33(36.7)
Unmarried	4(17.4)	23(34.3)	27(30)
Separated	1(4.3)	2(3)	3(3.3)
Widowed	5(21.7)	22(32.8)	27(30)
Occupation (previously involved)			
House wife	0(0)	43(64.2)	43(47.8)
Government work	2(8.7)	8(11.9)	10(11.1)
Private work	19(82.6)	12(17.9)	31(34.4)
Self employed	2(8.7)	4(6)	6(6.7)
Income from any source			
No income	11(47.8)	50(74.6)	61(67.8)
<Rs10000	3(13)	9(13.4)	12(13.3)
>Rs 10000	9(39.1)	8(11.9)	17(18.9)
Assets or Property			
Yes	9(39.1)	14(20.9)	23(25.6)
No	14(60.9)	53(79.1)	67(74.4)
Have children			
Yes	14(60.9)	41(61.2)	55(61.1)
No	9(39.1)	26(38.8)	35(38.9)
Frequency of visit	**Inmates (N=90) Visited by N (%)**		
	Children	**Relatives**	**Friends**
Weekly	7(7.8)	2(2.2)	2(2.2)
Monthly	28(31.1)	16(17.8)	5(5.6)
Yearly	13(14.4)	32(35.6)	13(14.4)
Not visited	42(46.7)	40(44.4)	70(77.8)
Total	90(100)	90(100)	90(100)

23 male participants, 19 (82.65%) were worked in the private sector previously. When asked about financial status, 61 (67.8%) of the inmates reported no monthly income presently from any source and 67 (74.4%) had no assets or property. Most of inmates were visited by the children (58%) and relatives (60%), but 70% of inmates were not visited by friends. Majority of inmates were visited monthly by children but yearly by relatives and friends (Table 1).

Table 2: Shows the number of health problems by gender and age group

Characteristics		Elderly with health problems				
		None N (%)	Single N (%)	Two N (%)	Three & above N (%)	Total N (%)
Gender	Male	2(8.7)	3(13)	4(17.4)	14 (60.9)	23(100)
	Female	5(7.5)	16(23.9)	24(35.8)	22(32.8)	67(100)
Age in years	Young old 60-69	1(4.2)	7(29.2)	8(33.3)	8(33.3)	24(100)
	Old old 70-79	1(3.6)	4(14.3)	9(32.1)	14(50)	28(100)
	Oldest old 80 & above	5(13.2)	8(21.1)	11(28.9)	14(36.8)	38(100)

The study findings showed that only 7.8% of inmates were free from any kind of health problems, while rest 92.2% of elders had one or more health problems. The percentage of respondents having single, two and three or more health problems were 21.1%, 31.1% and 40% respectively. Multiple health problems were seen to be more among higher age group elders as compared to younger aged [Table 2]. These findings are similar to the results shown in the study on morbidity profiles of elders in old age homes in Chennai which stated that 96.7% of elders had one or more health problems which consist of 51% of elders with three or more health problems (Rani, Palani and Sathiyasekran, 2012). This is also supported by the study done in Lucknow stated that all the inmate suffered from single or multiple physical health problems and majority of them having multiple physical health problem (Male=60%, female=68%) (Tiwari, Panday and Singh, 2012).

Table 3: Shows the common health problems of elderly in old age home

Health Problems	Male (N=23) N (%)	Female (N=67) N (%)	Total (N=90) N (%)
Hypertension	11(47.8)	29(43.3)	40(44.4)
Type 2 Diabetes Mellitus	10(43.5)	23(34.3)	33(36.7)
Hearing problem	9(39.13)	14(20.89)	23(25.55)
Arthritis	6(26.1)	9(13.4)	15(16.6)
Respiratory illness	2(8.7)	10(14.9)	12(13.3)
Vision problem	2(8.7)	7(10.4)	9(10)
Digestive problem	2(8.7)	5(7.5)	7(7.7)
Skin disease	1(4.3)	4(6)	5(5.5)

In the study population most common health problem was Hypertension (44.4%), followed by Type 2 Diabetes Mellitus (36.7%), hearing problem (25.55%), arthritis (16.6%) and respiratory illness (13.3%). The common morbidity pattern of the elderly was higher among the male as compared to females except the respiratory and skin diseases (Table 3). Similar findings was observed in the study done on the morbidity profiles of elderly in old age home in Chennai, which showed hypertension (39.5%), diabetes

(20.5%), skin problems (25.5%), hearing problems (17.85%), and respiratory illness (27.1%) (Rani, Palani and Sathiyasekra, 2012). A study done in Bijapur, Karnataka on morbidity pattern was also reported similar results that all the study participants were having one or more disease and most common being hypertension, diabetes and asthma **(**Vidyavati, Nalini and Masali, 2012). But the study conducted on health profile of residents of geriatric homes in Ahmadabad district which stated that maximum 54.9% inmates were suffered from arthritis followed by hypertension (54.2%) and diabetes (15.9%), where prevalence of arthritis was higher as compared to this study (Banker, Prajapati and Kedia, 2011).

Table 4: Shows the mean score of physical, psychological, social and environmental domains in accessing in assessing quality of life.

Characteristics	Mean scores of domain				
	Physical(SE)	Psychological(SE)	Social(SE)	Environmental(SE)	Total (SE)
Sex					
Male	53.65(3.02)	56.34(3.00)	36.21(2.79)	58.39(2.36)	204.61(8.41)
Female	53.73(1.96)	58.77(1.62)	34.11(1.88)	61.17(1.18)	207.81(5.26)
p-value*	0.983	0.462	0.563	0.258	0.756
			Age group		
Young old (60-69 years)	57.12(3.18)	57.41(2.97)	35.16(3.08)	60.41(2.06)	210.12(7.66)
Old old (70-79 years)	53.42(2.68)	56.50(2.79)	31.46(2.58)	58.35(2.11)	199.75(8.43)
Oldest old (80 years & above	51.76(2.70)	59.84(1.95)	36.68(2.52)	62.05(1.51)	210.34(7.06)
	0.423	0.589	0.368	0.347	0.555
			Marital status		
Married	57.48(2.85)	62.45(2.1)	41.36(2.04)***	64.42(1.73)	225.73(6.98)
Unmarried	53.48(2.67)	57.67(2.81)	32.81(2.30)	59.37(1.42)	203.33(7.34)
Separated	65(2.0)	44(0)	35.3(10.89)	60.67(5.61)	205(7.21)
Widowed	51.29(5.17)	56.98(3.82)	29.46(4.53)***	57.2(3.76)	187.96(8.19)
p-value*	0.064	0.057	0.005** 0.003***	0.053	0.005** 0.002***
			No of health problems		
≤ 3	57.45(1.83)	62.71(1.56)	38.37(1.74)	63.77(1.05)	222.30(4.44)
>3	46.58(2.91)	49.03(2.14)	27.23(2.76)	53.87(1.94)	176.37(7.31)
P-value*	0.001**	<0.001**	0.001**	<0.001**	<0.001**

**independent t-test p-value in between gender, no. of health problems and ANOVA p-value in age group, marital status at 0.05 level of significance*
***p-value <0.05 which shows significant difference at 0.05 level of significance*
****Post Hoc Tukey test applied in mean score in social domain and in between marital status shows significant difference in married and widowed (p-value=0.003) at 0.05 level of significance.*

The results of study showed mean WHOQOL-BREF score of total 90 inmates was 206.99±42.1. The mean score of physical, psychological, social and environmental domains were 53.71±15.64, 58.16±13.57, 34.66±14.87 and 60.46±10.14 respectively, where maximum score in environmental domain and minimum in social domain were observed. The poor social domain scores reflect the

miserable social relationship of inmates of old age homes with family, friends and community. No statistical significance was found when mean scores of domains were compared separately within male and female as well as different age groups. But the result showed that as age increases the mean scores of the physical domain decreases. Similar findings were observed in a study conducted in Hubli, which stated that the mean scores of Psychological, social and environmental domains were not differed significantly betweens males and females except physical domain(p=0.006) **(**Lokare, Nekar and Mahesh, 2011). After performing One Way ANOVA test, the total domains scores showed significant difference between different categories of marital status (F=4.56, p=0.05) and followed by Post Hoc Tukey test, which showed that there was significant difference between married and widowed(p=0.002). This reflects that quality of life of married elderly (both couple alive) was significantly better than widowed. After performing same test in all four domains separately, it was found that there was significant difference of mean score of social relationship domain in different categories of the marital status (F=4.54, p=0.005) and after Post Hoc Tukey test, significant difference was observed in married and widowed (p=0.003) [Table 4]. Similar result was reported in the study conducted on morbidity, co-morbidity, and their association with disability among community-dwelling oldest-old in Israel, which showed a significant relationship between the marital status and HQoL. They found that married participants had a higher average score of HRQoL than the singles, divorced, widows and widowers (Fuchs, Blumstein, Novikov, Walter-Ginzburg, Lyanders, Gindin, Habot and Modan, 1998). By performing independent t-test, the respondents with more than three morbidities showed significant difference in mean scores of physical (t=3.39, df=88, p=0.001), psychological (t=5.105 df=88 p= <0.001), social (t=3.559 df=88 p=0.001) and environmental (t=4.896 df=88 p= <0.001) domains with the respondents having minimum 3 or less morbidity[Table 4]. It was found similar in the Hubli study that the mean score of physical domain [p=0.001], social domain [p=0.015] and total score [p=0.015] were significantly more with the elderly with less than 3 health problems **(**Lokare, Nekar and Mahesh, 2011).

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