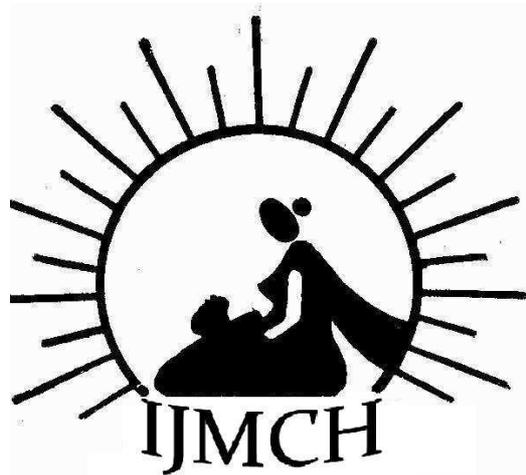


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The whole world particularly the developing countries are going through a demographic transition due to which the proportion of elderly population (60+) is growing steadily. The gender dimensions in ageing and its relative aspects also are very different...

**A Study of Epidemiological Correlates of Health Status and Quality of Life of Elderly Women in a Rural Area of Punjab, India**

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**ABSTRACT**

**Introduction:** The whole world particularly the developing countries are going through a demographic transition due to which the proportion of elderly population (60+) is growing steadily. The gender dimensions in ageing and its relative aspects also are very different. The life expectancy of females is higher than that of males, with low literacy and low income, with high incidence of widowhood all adds to the vulnerability of elderly women in a gender segregated society like India.

**Aims:** To know about the epidemiological correlates of health status and quality of life of elderly women in a rural area of Punjab.

**Settings & design:** cross-sectional community –based study design.

**Material & Methods:** Present study included women from 10 villages from field practice area of Rural Health and Training Center (RHTC) located at village Pohir. This center is an integral part of Department of Community Medicine, Dayanand Medical College and Hospital, Ludhiana. A convenience sample of 10% was taken for the present study. Hence 108 subjects out of total elderly women were included in the study. Their health status and quality of life was appraised using a pre tested performa.

**Statistical analysis:** Simple percentages.

**Result:** In general health status and quality of life of women was dismal with 79.7% being illiterate, 51.9% depressed, 50% widows, 20.4% and 13.9% overweight and obese respectively. Only 6.5% had good mental status. Overall 71.3% and 19.5% had good and fair quality of life respectively with only 0.9% having poor quality of life.

**Key words:** *elderly women, rural, health status, quality of life.*

**Introduction**

The whole world particularly the developing countries are going through a demographic transition due to which the proportion of elderly population (60+) is growing steadily. As per the Census of India undertaken in the year 2001 the aged population 60 years and above constitutes 7.5 percent to the total population of country comprising nearly 7.1 percent of total males and 7.8 percent of total females [1]. The life span has increased in India from 32 years in 1947 to 64 years at present; it is projected to be 67 years for males and 69 years for females in 2011-16 [2]. At age 60 too, the expectation of life shows a steady rise and it is slightly higher for women. India is still poised to become home to the second largest number of older persons in the world.

The special features of the elderly population in India are

(a) A majority (80%) of them are in the rural areas, thus making service delivery a challenge.

(b) Feminization of the elderly population (51% of the elderly population would be women by the year 2016).

(c) Increase in the number of the older-old (persons above 80 years).

(d) A large percentage (30%) of the elderly population is below poverty line [3].

The gender dimensions in ageing and its relative aspects also are very different. The life expectancy of females is higher than that of males, with low literacy and low income, with high incidence of widowhood all adds to the vulnerability of elderly women in a gender segregated society like India. The proportion of elderly women in Punjab is 9.5% which is higher than the national. In view of the above facts study was planned to know about the epidemiological correlates of health status and quality of life of elderly women in a rural area of Punjab.

### Material and Methods

Present study included women from 10 villages from field practice area of Rural Health and Training Center (RHTC) located at village Pohir. This center is an integral part of Department of Community Medicine, Dayanand Medical College and Hospital, Ludhiana. A convenience sample of 10% was taken for the present study. Hence 108 subjects out of total elderly women were included in the study. Their health status and quality of life was appraised using a pre tested performa.

The following scales (suitably modified if required /indicated) were used to assess various parameters.

1. Likert's Scale [4]
2. Socioeconomic status (Modified Uday Pareek scale) [5]
3. Activities of Daily Living (ADL) [6]
4. Assessment of Depression [7]
5. Mental Status examination [8]
6. Assessment of Social Support and Relations [9]
7. Psychological Well Being Inventory [10]
8. Determination of Quality of life [11]

### Observations

Among 108 females 59.2% are in age group of 60-69 whereas 40.8% are more than 70 years of age. Out of total 108 subjects majority i.e 102(94.4 %) were Sikhs, 05(4.7%) Hindus and 01(0.9%) was Muslim. The vast majority of the subjects, 87% were from middle socioeconomic group. 5.5% and 7.5% subjects were in low and high socioeconomic status, respectively. Half of total subjects widows.79.7% of total females were illiterate.50.9% of subjects had no personal income and 38.9% of subjects had meager income of  $\leq$ Rs250 per month (table 1). Among the study subjects overall rates of overweight (BMI 25.00 - 29.99) and obesity (BMI > 30) were 20.4% and 13.9%, respectively. Further, 14.8% were underweight and rest 50.9% were normal (table2). The estimated rate of truncal obesity (according to waist hip ratio >0.85 in females) was 64.9% (table3).

Out of 108 subjects 80(74.1%) were anaemic, 68(63%) had dental problem, 71(65.7%) had joint pain, 51(47.2%) had cataract, 53(49.1%) were hypertensive, 28(25.9%) were having senile deafness, 32(29.2%) suffered from acid peptic disease, 10(9.3%) had chronic obstructive pulmonary disease and 9(8.3%) were diagnosed cases of diabetes mellitus (table

4). About 73.1% of all the elderly were not dependent for the activities of daily living. Of the remaining 26.9%, the vast majority i.e 21.3% were partially dependant (table 5). 48.1% of the study population were not depressed, while 51.9% had some form of depression, most of them being in the mild category (table6). Table 7 reveals that only 6.5% of subjects enjoyed good mental status while 83.3% and 10.2% were having fair and poor mental status respectively. Table 8 depicts that only 4.6% of total subjects were doing physical exercise. Table 9 shows that majority (92.6%) of subjects had adequate social support. Majority of subjects (72.2%) had good psychological well being and 27.8% had poor psychological well being (Table 10). An overwhelming majority (79.6%) of elderly enjoyed an excellent/good quality of life, while those having a poor quality of life were <1% (table 11).

**Table: 1 Distribution of Subjects according to Socio-demographic Characteristics.**

Age(in years)		Elderly females (N=108)
1	60-64	32(29.6%)
2	65-69	32(29.6%)
3	70-74	21(21.4%)
4	≥75	23(19.4%)
<b>Religion</b>		
1	Hindu	05(4.7%)
2	Sikh	102(94.4%)
3	Muslim	01(0.9%)
<b>Socio Economic Status as per MUPS*</b>		
1	Low(<16)	06(5.5%)
2	Low Middle(17-25)	54(50.0%)
3	High Middle(26-34)	40((37.0%)
4	High(>34)	08(7.5%)
<b>Marital Status</b>		
1	Currently Married	52(48.2%)
2	Unmarried	01(0.9%)
3	Widow	54(50.0%)
4	Divorced	01(0.9%)
5	Living away from spouse	00
<b>Education</b>		
1	Illiterate	86(79.7%)
2	Primary	14(12.9%)
3	Middle	07(6.5%)
4	High school	01(0.9%)
5	Graduate	00
6	Post-graduate	00
<b>Income</b>		
1	Nil	55(50.9%)
2	≤Rs250	42(38.9%)
3	Rs250-Rs2000	8(7.4%)
4	Rs2001+	03(2.8%)

**Table: 2 Distribution of Subjects according to Body Mass Index (BMI)**

BMI	Category	Elderly Females n=108	Percentages
<18.5	Underweight	16	14.8
18.5-24.9	Normal	55	50.9
25.0-29.9	Overweight	22	20.4
≥30	Obese	15	13.9

**Table: 3 Distribution of Subjects according to Waist Hip Ratio**

Waist-Hip ratio	Elderly Females N=108	Percentage
Normal	38	35.1
High	70	64.9

**Table:4 Distribution of Subjects according to Morbidity**

Morbidity	Elderly Females N=108	Percentage
Anemia	80	74.1
Dental Problem	68	63.0
Joint Pain	71	65.7
Cataract	51	47.2
Hypertension	53	49.1
Senile Deafness	28	25.9
Acid Peptic Disease	32	29.6
Chronic Bronchitis	10	9.3
Diabetes Mellitus	09	8.3

**Table: 5 Distribution of Subjects according to Activities of Daily Living (ADL) Scale**

<b>ADL</b>	<b>Elderly Females N=108</b>	<b>Percentage</b>
Dependant (10-17)	06	5.6
Partially Dependant (18-26)	23	21.3
Not Dependant (27-30)	79	73.1

**Table: 6 Distribution of Subjects according to Depression Category**

<b>Depression Category</b>	<b>Elderly Females N=108</b>	<b>Percentage</b>
Normal (0-10)	52	48.1
Mild Depression (11-13)	49	45.4
Severe Depression (14-20)	07	6.5

**Table: 7 Distribution of Subjects according to Mental Status**

<b>Mental Status</b>	<b>Elderly Females N=108</b>	<b>Percentage</b>
Good Orientation (0-2errors)	07	6.5
Fair Orientation (3-8 errors)	90	83.3
Poor Orientation (9-10 errors)	11	10.2

**Table: 8 Distribution of Subjects according to indulgence in Physical Exercise**

Physical Exercise	Elderly Females N=108	Percentage
Yes	05	4.6
No	103	95.4

**Table: 9 Distribution of Subjects according to Social Support**

Social Support	Elderly Females N=108	Percentage
Adequate(Score >36)	100	92.6
Inadequate(Score ≤ 36)	08	7.4

**Table: 10 Distribution of Subjects according to Psychological Well Being**

Psychological Well Being	Elderly Females N=108	Percentage
Good (Score>30)	78	72.2
Poor (Score≤30)	30	27.8

**Table: 11 Distribution of Subjects according to Quality of Life**

Quality of life	Elderly Females N=108	Percentage
Excellent (110-89)	09	8.3
Good (88-67)	77	71.3
Fair (66-45)	21	19.5
Poor (44-22)	01	0.9

### Discussion

In the present study, 95% of subjects belonged to Sikh community. The proportion was higher when compared with figure reported by district wise data of Punjab according to Census Report 2001 which showed that in rural Ludhiana majority of people i.e 86.6% were Sikhs [12]. The phenomenon of marriage in this part of world especially in India is almost universal. Table 1 reveals that 48.2% of the subjects were currently married and 50% of subjects were widow/widowers. Because the life expectancy of females is higher than that of males in latter ages, the incidence of widowhood adds to the vulnerability of elderly women in a gender-segregated society like India.

Two reasons are given for the marked gender disparity in widowhood in India

(i) Longer life span of women compared to men,

(ii) The general tendency for women to marry men older than themselves [13]. Almost similar findings were observed by Swain P in her study on health status among elderly. She reported that 3.5% were never married, 27.8% were currently married, 67.7% were widows/widowers and 1% were divorced or separated [14]. In the present study 61.0% were illiterate. According to a report by Asia Pacific Development Centre on disability in 1950 there were 5.4 million girls enrolled in primary, 0.5 million girls enrolled in secondary and 0.2 millions girls enrolled in higher education [15]. The population according to census 1951 was 361088 thousand [16]. Swami HM *et al* in their study in Chandigarh found that 33.14% were overweight, 7.54% were obese and 14.36% were underweight. The results are comparable with the present study [17]. It is evident that majority (73.1%) of subjects were not dependant as far as their activities of daily living was concerned. This may probably be due to fact that more than 64% of subjects in present study was < 70 years of age. Kumari RSS in her study on elderly women found that 3.4% of total women were fully dependant, 13.4% were partially dependant and 83.2% were not dependant. This is comparable with the present study [18]. In the present study 51.9 % of the subjects were mildly or severely depressed where as 48.1% were not depressed. Jain RK *et al* in their study in urban slums found that 57.8% of geriatric population was suffering from depression which was similar to present study. [19]. According to present study majority of subjects had fair mental status. Only 6.5% females had good orientation. This may be partly explained by high illiteracy levels and a recall bias since the instrument use was dependant on literacy level and ability to recall certain events. Quality of life (QOL) would be affected by a number of significant positive and negative life events and these life events may be related either to his family or society or community where he lives. QOL need not be poor in poor man's home or in a handicapped person's home [20]. Majority (71.3%) of elderly had good quality of life where as only 0.9% had poor quality of life.

### Conclusions

In general health status and quality of life of women was dismal with 79.7% being illiterate, 51.9% depressed, 50% widows, 20.4% and 13.9% overweight and obese respectively. Only 6.5% had good mental status. Overall 71.3% and 19.5% had good and fair quality of life respectively with only 0.9% having poor quality of life.

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