

## MORBIDITY PATTERN AMONG ELDERLY POPULATION IN A RURAL AREA OF DEHRADUN IN UTTARANCHAL

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### Abstract :

**Research Question :** *What is the morbidity pattern among elderly people in rural area of Dehradun?*

### Objectives :

- (1) *To assess the morbidity pattern among elderly population.*
- (2) *To assess the psycho-social problems among elderly people.*
- (3) *To assess the relationship between addiction and hypertension among them.*

**Study design :** *Cross-Sectional.*

**Setting :** *Atturwala - a rural area of district Dehradun in Uttaranchal.*

**Participants :** *332 elderly people aged 60 years and above.*

**Statistical Analysis :** *Proportions, Chi-Square test.*

**Results :** *It was observed that 78.3% elderly had ophthalmic problem, 69.3% elderly had psycho-social problems followed by hypertension (49.1%), Chronic bronchitis (22%) and asthma (12%). A significant relation was found between hypertension and addiction i. e. smoking and / or alcohol ( $p < .001$ ). Respiratory diseases were found in 47.3% elderly persons. Depression was highly dominating problem among elderly (59.6%).*

**Key words :** *Morbidity, Refractory error, Hypertension, Addiction*

### Introduction :

According to the United Nations (UN)<sup>1</sup>, population projection, the expectation of life at birth for males and females in India would be 67 years and 69 years respectively by 2011-2016. The projection beyond 2016 has indicated that 21% of the population in India will be elderly i. e. 60 years and above by the year 2050.

The problems associated with the ageing in the population are : the lack of medical facilities ( as they are neglected by the family members) and of social and economic support. Due to the fast changing

cultural and moral values and shortage of accomodation with higher rents in urban areas, the migrants prefer to leave behind their elderly parents at their native places. The changing social affinity towards elderly has also created a new concept of nuclear family in the society. Keeping this view point, the information regarding morbidity profile of elderly persons in the population is necessary so that a proper planning and assistance can be suggested to the concerned authorities for the upliftment of the aged population.

### Material and Methods :

The present study is based on a survey



which was conducted in Atturwala village under Doiwala block of district Dehradun, Uttaranchal between Oct. 2000 and March 2001.<sup>2</sup> There were 332 (5.9%) persons aged 60 years and above, out of which 148 (44.6%) and 184 (55.4%) were males and females respectively. Each individual in the study was subjected to personal interview and clinical examination i. e. Anthropometric, B. P. measurements, vision testing etc. The information was recorded on a pre-designed and pre-tested proforma.

A detailed history was taken regarding

past and present illness. The WHO (1978)<sup>3</sup> criteria for assessment of hypertension among elderly persons was adopted [ i. e. Normotensive systolic BP < 40 mm of Hg. and Diastolic BP < 90 mm of Hg. and Hypertensives - Systolic B.P. > 160 mm of Hg. and Diastolic BP > 95 mm of Hg.] The informations regarding alcohol addiction and smoking (cigarette/Bidi) were also collected which were correlated with chronic diseases. The purpose of the study was explained and confidentiality of the study subjects was maintained throughout the study period.

## Results :

**TABLE - 1**  
Distribution of elderly according to various diseases

Type of Disease	Male (148) No. (%)	Female (184) No. (%)	Total (332) No. (%)
Ophthalmic	114 (77.0)	146 (79.3)	260 (78.3)
Psychosocial	97 (65.5)	133 (72.3)	230 (69.3)
Hypertension	67 (45.3)	96 (52.2)	163 (49.1)
Respiratory	89 (60.1)	68 (37.0)	157 (47.3)
Orthopedic	44 (29.7)	58 (31.5)	102 (30.7)
ENT	12 (8.1)	8 (4.3)	20 (6.0)
GIT	8 (5.4)	7 (3.8)	15 (4.5)
Endocrine	6 (4.1)	2 (1.1)	8 (2.4)
Skin	2 (1.3)	3 (1.6)	5 (1.5)
Genito Urinary	4 (2.7)	3 (1.6)	7 (2.1)
Hernia	3 (2.0)	-----	3 (0.9)

**Table - 2**  
**Distribution of elderly according to Ophthalmic problems.**

Ophthalmic Problem	Male (148) No. (%)	Female (184) No.(%)	Total (332) No.(%)
Cataract	90 (60.8)	134 (72.8)	224 (67.5)
Refractory error	21 (14.2)	10 (5.4)	31 (9.3)
Glaucoma	1 (0.7)	2 (1.1)	3(0.9)
Conjunctivitis	2 (1.3)	-----	2(0.6)
<b>Total</b>	<b>114 (77.0)</b>	<b>146 (79.3)</b>	<b>260 (78.3)</b>

**Table - 3**  
**Distribution of elderly according to psycho-social problems.**

Psycho-social Problem	Male (148) No. (%)	Female (184) No.(%)	Total (332) No.(%)
Loneliness	10 (6.7)	4 (2.2)	14 (4.2)
Feeling neglected	5 (3.4)	3(1.6)	8 (2.4)
Anxiety	3 (2.0)	3(1.6)	6(1.8)
Dementia	2 (1.4)	2 91.1)	4 (1.2)
Depression	77 (52.0)	121 (65.8)	198 (59.6)
<b>Total</b>	<b>997 (65.5)</b>	<b>133 (72.3)</b>	<b>230 (69.3)</b>

**Table - 4**  
**Relation of hypertension with addiction among elderly.**

Addiction	Hypertensive No. (%)	Normotensive No.(%)	Total No.(%)
Smoking (Beedi/Cigarette/Hukka)	36 (22.0)	20 (11.18)	56(16.9)
Alcohol users (Kacchi/Desi/English wine)	12(7.4)	16 (9.5)	28 (8.4)
Both (Smoking + Alcohol)	32 (19.6)	10 (6.0)	42 (12.7)
Non Addictors (No smoking & liquor)	83 (51.0)	123 (72.7)	206 (62.0)
<b>Total</b>	<b>163 (49.1 )</b>	<b>169 (50.9)</b>	<b>332 (100.0)</b>

$X^2 = 16.6$ ; d. f. = 1,  $p < .001$



TABLE - 5

Distribution of elderly according to Respiratory diseases.

Disease	Male (148) No.(%)	Female (184) No.(%)	Total (332) No.(%)
Tuberculosis	2 (1.4)	2 (1.1)	4 (1.2)
Chronic Bronchitis	42 (28.4)	31 (16.8)	73 (22.0)
Asthma	22 (14.8)	18 (9.8)	40 (12.0)
URI	5 (3.4 )	9 (5.0)	14 (4.2)
Coryza	18 (12.2 )	8 (4.3)	26 (7.8)
<b>Total</b>	<b>89 (60.2)</b>	<b>68 (37.0)</b>	<b>157 (47.3)</b>

Out of 332 elderly persons aged 60 years and above, 78.3 % had ophthalmic problems. 69.3% had psycho-social problems. The most dominating was depression (59.6%), whereas 49.1% was suffering from hypertension. 60% males and 37% females had respiratory diseases followed by orthopedic disabilities among 30.7% elderly population (Table 1). Table - 2 reveals that majority (67.5%) of elderly had cataract whereas only 1% had glaucoma as the cause of diminishing or loss of vision. Table - 3 shows that 72.3% of females and 65.5% males were suffering from psychosocial problems. It was also observed that females were found to be more prone to depression (65.8%). It can be seen from Table-4 that 163 (49.1%) of elderly were hypertensive out of which 83 (51%) were non-addictors i. e. without smoking and alcoholism. A significant relation was found between hypertension and addiction among the elderly population ( $X^2 = 16.6$ ; d.f. =1,  $p < .001$ ). Table - 5 reveals that 47.3% elderly persons were suffering from respiratory diseases. Chronic bronchitis (22%) was the leading respiratory disease among them followed by asthma (12%), Coryza (7.8%),

URI (4.2%) and tuberculosis (1.2%). Other medical problems related to elderly were orthopedic disabilities with the highest prevalence of osteoporosis (18%) which was followed by spondylitis (9.3%).

### Discussion :

The study reveals that 78.3% elderly were suffering from various ophthalmic problems and the leading cause of diminished vision was cataract (67.5%). The prevalence of cataract was higher among females (72.8%) while it was 60.8% among males. Similar findings have also been reported by Grover et al (2004)<sup>4</sup>, Sindal et al (1979)<sup>5</sup>, Mc Donnell et al (1979)<sup>6</sup>, Srivastava et al (1979)<sup>7</sup> and Prakash et al (2004)<sup>8</sup>. It was observed that 69.3% of elderly had psychosocial problems with a leading cause of depression (59.6%). Subramaniam et al (1999)<sup>9</sup> had also reported the similar finding. In the present study it was seen that 49% elderly persons were hypertensive with and without addiction i. e. smoking and / or alcoholism. The relationship between hypertension and addiction was found highly significant ( $p < .001$ ). Studies conducted by Chadha et al (1990)<sup>10</sup> and Grappelli



et al (1992)<sup>11</sup> had shown the significant relation between hypertension and smoking as one of the addictions. Prakash et al (2004)<sup>5</sup> reported in their study that 48% of elderly were hypertensive and they also found a significant relation between smoking and hypertension. 47.3% elderly were found to have respiratory diseases followed by orthopedic disabilities (30.7%) with a high prevalence of osteoporosis (18.1%) and the rest were living with ENT, GIT, Endocrine and Genito-urinary problems. As far as the addiction among elderly is concerned, smoking was highly prevalent and caused chronic bronchitis (22%) with higher prevalence among males (28.4%) and asthma (12%). Similar finding was also reported by Grover et al (2000)<sup>6</sup>.

Looking upon the various health related problems among elderly it is essential for Govt., policy makers, NGOs and voluntary organizations to provide & promote health services with proper care to elderly at their door step with affordable reach.

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