

ORIGINAL RESEARCH

# TO STUDY THE CORRELATES OF FUNCTIONAL LIMITATIONS AMONG GERIATRIC POPULATION AND ITS ASSOCIATION WITH PERCEIVED BURDEN OF PRIMARY CAREGIVERS.

Ishan Arora<sup>1</sup>, Vishal Gupta<sup>2</sup>, Sanjay Gupta<sup>3</sup>, Shalini Devgan<sup>4</sup>, Urvashi<sup>5</sup>, Baltej<sup>6</sup>, Nishu Dhiana<sup>7</sup>  
<sup>1</sup>PG Resident, <sup>2,4</sup>Associate Professor, <sup>3</sup>Professor and Head, <sup>5</sup>Assistant Professor, <sup>6</sup>Statistician, <sup>7</sup>Senior Resident,  
Department of Community Medicine, GGS Medical College, Faridkot Punjab, India.

**Corresponding Author**

Shalini Devgan,  
Associate Professor, Department of Community Medicine, GGS Medical College, Faridkot Punjab, India.  
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**Abstract**

**Background:** Old age in many developing countries is seen to begin at the point when active contribution is no longer possible.. The present study was conducted to correlate the functional limitations among geriatric population and its association with perceived burden of primary caregivers.

**Material & method:** The present community based cross sectional study was conducted in urban field practice area of urban health training centre (UHTC) of Department of Community Medicine, GGSMCH, Faridkot. The data collected during the survey was coded and entered in MS Excel and analyzed using suitable SPSS (Statistical Package for Social Sciences) version 26.

**Results:** Majority of the subjects belonged to age group 60-80 yrs. (96.2%). There were 52.3% females and 47.7% males included under the study. About 4/5<sup>th</sup> of the elderly subjects were having more than 1 functional limitation (83.8%). About 90% of the subjects could perform all activities in the Activities of Daily Living (ADL) domain unassisted (89.8%). More than 4/5<sup>th</sup> of the subjects could perform all activities in the Instrumental Activities of Daily Living (IADL) domain unassisted (84.1%). About 3/4<sup>th</sup> of the subjects required assistance of the caregiver in performing the activities of Leisure and Social Activities domain (73.8%). More than 4/5<sup>th</sup> of the subjects could perform all activities in the Lower Extremity Mobility domain unassisted (86.1%). About 3/4<sup>th</sup> of the subjects could perform all activities in the General Physical Activities domain unassisted (77.7%). About 3/5<sup>th</sup> of the caregivers were having mild to moderate burden (60%). On statistical analysis by Chi-square test & Fisher's exact test :Financial Support status of the elderly and Caregiver burden were found out to be statistically significant with functional limitations.

**Conclusion:** The present study concluded that Financial Support status of the elderly and Caregiver burden were found out to be statistically significant with functional limitations.

**Keywords:** Financial Support, elderly, Caregiver burden, functional limitations.

**INTRODUCTION**

The Indian aged population is currently the second largest in the world. The recent demographic trend shows that in 1950, 5.6% of the India's population was classified as elderly, which by 1990 rose to 7.1%, and by 2025 it is likely to reach 12.3%.<sup>1</sup> Increase in old age dependency ratio which rose from 10.9% in 1961 to 14.2% in 2011, is projected to increase from 15.7% and 20.1% in 2021 and 2031 respectively.<sup>2</sup> Old people have limited regenerative and immune abilities and are thus, more prone to diseases.<sup>3</sup> A caregiver has been defined as a family member who has been living with the patient, and has been closely involved in his/her activities of daily living, health care, and social interaction for more than a year.<sup>4</sup> It involves taking care of personal hygiene of patients, emotional support such as listening, counseling, and companionship, and informational caring such as learning how to change the living environment of the patients. Various studies have shown a high degree of subjective and objective burden on family members. Burden of care was defined by Zarit, an American Gerontologist, as —the discomfort experienced by the principal caregiver of an older family member, including the caregiver's health, psychological well-being, finances, and social life.<sup>5</sup> Functional limitation is defined as restrictions in performing vital activities of everyday life. Functional limitation is a dynamic process which gradually develops over an extended period of time, leading to difficulties in performing vital activities of daily living (ADL) effectively. Functional limitation is strongly associated with reduced quality of life and an elevated risk for chronic conditions and premature death. Research suggests that limitations in functioning begin between the ages of 40–55 years and continues in old age.<sup>6</sup> The patients

caregivers perform a wide range of tasks and spend many hours a day caring. Caregivers face huge responsibilities and their future is uncertain as the disease progresses and prognosis is variable, making the amount of care needed unpredictable.<sup>7</sup> Therefore, this study was planned to conduct to study the correlates of functional limitation among geriatric population and to study the perceived burden among the primary caregivers of geriatric population. Further association between functional domains and caregiver burden have also been established.

## **MATERIAL & METHODS**

The present community based cross sectional study was conducted in urban field practice area of urban health training centre (UHTC) of Department of Community Medicine, GGSMCH, Faridkot. The study was conducted over a period of one year. Before the commencement of the study ethical approval was taken from the ethics committee of the institute. The study was conducted in old male / female plus caregiver duo of field practice area in the age group of 60 years and above. Individuals equal to or more than 60 years of age, all consenting people aged more than 60 years who require help with atleast one or more of the activities of daily living (ADL) or two or more of the instrumental activities of daily living (IADLS) were included in the study. Individuals below 60 years of age, those participants who were not willing or not in position to give information due to any reason, paid Caregivers were excluded from the study.' The sample size was 130. The sampling frame of present study consists of all the households of urban slums in Faridkot block. The sampling units of present study consists of households with individuals of age group 60 years and above. The simple random sampling technique was used for sample collection. The study was conducted by employing house to house survey technique. Respondents who fulfilled inclusion criteria were selected by simple random sampling technique. Data was collected by structured questionnaire tool and face to face technique was used. The structured interview scheduled with open and closed ended questions were framed taking extensive reference to research paper and literature along with standard questionnaires. The study consists of 3 questionnaires:- SOCIO-DEMOGRAPHIC QUESTIONNAIRE, NHANES QUESTIONNAIRE ITEMS - 19 NHANES, ZARIT BURDEN SCALE.

### **Methodology:**

The proposed study was conducted in urban field practice area of Faridkot block (selected purposely of 3 blocks). Prior to data collection, list of households with respondents above 60 yrs of age was taken from ANMs of UHTC which comes under the urban field practice area of Department of Community Medicine, GGSMCH Faridkot. After line listing, unique identification number was allotted to each household with elderly based on which the allocated sample size was randomly selected using computer generated random numbers. Selected households were visited and informed written consent was taken from elderly and their caregivers. Both the questionnaires had been translated to punjabi and retranslated to English to ascertain any unacceptable deviation from the original & were approved by the various faculty in different departments regarding functional equivalency. The two versions were used freely according to the preference of the respondents. On the day of the visit the subject was explained the purpose of the study. They were assured of utmost confidentiality. The method of filling the questionnaire was explained to the subject. The proforma was filled up in the presence of researcher. An average time of 50 minutes was spent for the whole process. The proforma was pretested in 10 elderly persons of field practice area which were not to be included in the study.

Content validity of the tool was determined by the expert's opinion. The tool was circulated among experts from the field of community health nursing, Community medicine. After their valuable suggestions, amendments were made. The English version of the tool was translated into Punjabi with the help of a language expert, then again tool was translated to English.

Reliability of tools was computed by test retest method using Karl Pearson's coefficient of correlation and thereby after Spearman's Brown Prophecy formula. The reliability of the knowledge tool was  $r = 0.86$  and for utilization and client satisfaction tool  $r = 0.88$ . Hence, the tool was reliable.

### **Data analysis:**

The data collected during the survey was coded and entered in MS Excel and analyzed using suitable SPSS (Statistical Package for Social Sciences) version 26. Data was represented in the form of tables and graphs (whichever was appropriate) for easy interpretation. Proportions and frequencies were calculated for descriptive data analysis. Association of functional disability and caregiver burden with age of subjects, chronic health conditions, relationship with elderly was established using Chi square test. P value  $<0.05$  was considered as statistically significant.

## **RESULTS**

Out of total subjects, 68 (52.3%) were females and 62 (47.7%) were males. During the study, it was observed that majority of subjects belonged to age group 60-80 years (96.2%), followed by age group 81-100 years (3.8%). In the present study, it was observed that majority of the subjects were having more than 1 functional limitation (83.8%).

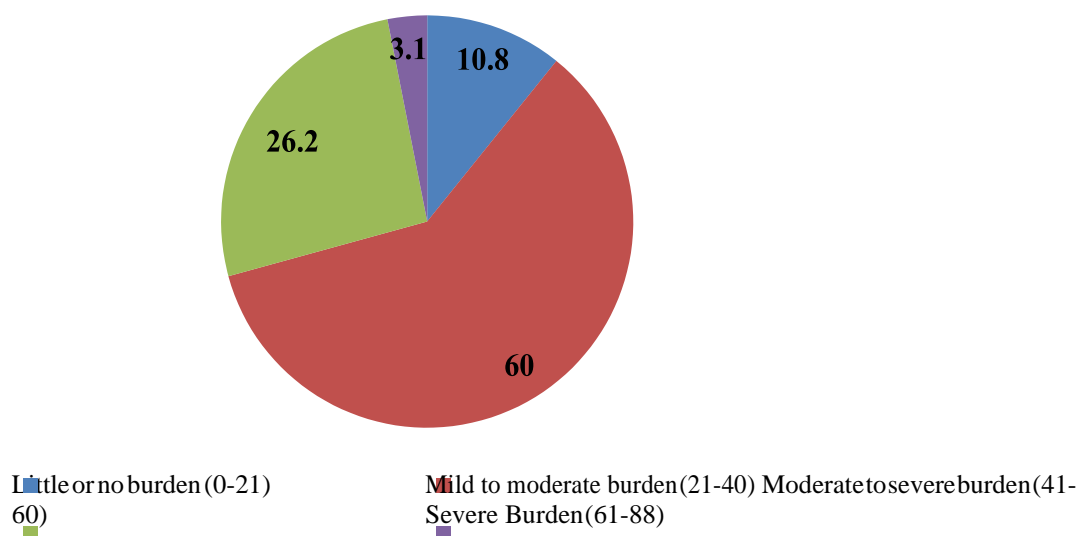
Majority of the type of care given was to assist in the activities of daily living (ADL) (94.6%), followed by care given to assist in the instrumental activities of daily living (IADL) (5.4%). Out of the total subjects, majority of the subjects provided care for 0-6 hours (62.3%), followed by those who provided care for 7-12 hours (37.7%). Out of the total caregivers, majority were sons of the elderly (39.2%), followed by daughter-in-law (30.8%), spouse (19.2%), daughter(6.2%) and others (4.6%). Out of all caregivers, majority were married with spouse present (82.3%), followed by never married (6.9%) and divorced (6.2%).

In the activities of daily living domain, majority of the subjects (89.8%) could perform all the activities, followed by those who couldn't (10.2%). In the instrumental activities of daily living domain, majority of the subjects (84.1%) could perform all the activities, followed by those who couldn't (15.9%). In the leisure and social activities domain, majority of the subjects (73.8%) couldn't perform all the activities, followed by those who could (26.2%). In the lower extremity mobility domain, majority of the subjects (86.1%) could perform all the activities, followed by those who couldn't (13.9%). In the general physical activities domain, majority of the subjects (77.7%) could perform all the activities, followed by those who couldn't (22.3%).

**Table 1: Distribution of subjects according to domains of functional status (NHANES Questionnaire)**

| Domain                                      | Activity                                    | Yes (%age) | No (%age)  |
|---|---|------------|------------|
| <b>Activities Daily Living</b>              | <b>Getting in and out of bed</b>            | 121 (93.1) | 9 (6.9)    |
|   | <b>Using fork, knife, drinking from cup</b> | 118 (90.8) | 12 (9.2)   |
|   | <b>Walking between rooms on same floor</b>  | 110 (84.6) | 20 (15.4)  |
|   | <b>Dressing yourself</b>                    | 118 (90.8) | 12 (9.2)   |
| <b>Instrumental Activities Daily Living</b> | <b>House Chores</b>                         | 115 (88.5) | 15 (11.5)  |
|   | <b>Managing Money</b>                       | 108 (83.1) | 22 (16.9)  |
|   | <b>Preparing Meals</b>                      | 105 (80.8) | 25 (19.2)  |
| <b>Leisure and Social Activities</b>        | <b>Going out to movies, events</b>          | 17 (13.1)  | 113 (86.9) |
|   | <b>Leisure Activity at home</b>             | 41 (31.5)  | 89 (68.5)  |
|   | <b>Attending social events</b>              | 44 (33.8)  | 86 (66.2)  |
| <b>Lower extremity mobility</b>             | <b>Walking up 10 steps</b>                  | 120 (92.3) | 10 (7.7)   |
|   | <b>Walking for a quarter mile</b>           | 104 (80)   | 26 (20)    |
| <b>General Physical Activities</b>          | <b>Grasping or holding small objects</b>    | 121 (93.1) | 9 (6.9)    |
|   | <b>Lifting or Carrying</b>                  | 101 (77.7) | 29 (22.3)  |
|   | <b>Reaching up overhead</b>                 | 107 (82.3) | 23 (17.7)  |
|   | <b>Standing for long periods</b>            | 100 (76.9) | 30 (23.1)  |
|   | <b>Standing up from armless chair</b>       | 108 (83.1) | 22 (16.9)  |
|   | <b>Stooping</b>                             | 100 (76.9) | 30 (23.1)  |
|   | <b>Crouching</b>                            | 86 (66.2)  | 44 (33.8)  |
|   | <b>Kneeling</b>                             | 81 (62.3)  | 49 (37.7)  |

**Figure 2: Distribution of subjects according to Zarit Burden Interview Scale**



Out of all subjects, majority were having mild to moderate burden (60%), followed by moderate to severe burden (26.2%), little or no burden (10.8%) and severe burden (3.1%).

**Table 2: Analysis showing association of age group of elderly subjects with their functional limitations**

| Variables |        | Functional Limitations |                   |                        | Total      |
|-----------|--------|------------------------|-------------------|------------------------|------------|
|           |        | No Limitation          | With 1 Limitation | More than 1 Limitation |            |
| Age Group | 60-80  | 11 (8.8)               | 10 (8)            | 104 (83.2)             | 125 (96.2) |
|           | 81-100 | 0                      | 0                 | 5 (100)                | 5 (4.8)    |
| Total     |        | 11 (8.5)               | 10 (7.7)          | 109 (83.8)             | 130        |

**Fisher's Exact Test=0.187.  $\chi^2=1.002$ , p=.606, df=2**

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically non-significant.

**Table 3: Analysis showing association of gender of elderly subjects with their functional limitations**

| Variables |        | Functional Limitations |                   |                        | Total |
|-----------|--------|------------------------|-------------------|------------------------|-------|
|           |        | No Limitation          | With 1 Limitation | More than 1 Limitation |       |
| Gender    | Male   | 6 (9.7)                | 5 (8.1)           | 51 (82.2)              | 62    |
|           | Female | 5 (7.3)                | 5 (7.3)           | 58 (85.4)              | 68    |
| Total     |        | 11 (8.5)               | 10 (7.7)          | 109 (83.8)             | 130   |

**$\chi^2=0.264$ , p=.876, df=2**

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically non-significant.

**Table 4: Analysis showing association of retirement status of elderly subjects with their functional limitations**

| Variables |     | Functional Limitations |                   |                        | Total     |
|-----------|-----|------------------------|-------------------|------------------------|-----------|
|           |     | No Limitation          | With 1 Limitation | More than 1 Limitation |           |
| Retired   | Yes | 4 (5.2)                | 6 (7.9)           | 66 (86.9)              | 76 (58.4) |

|   |    |          |          |            |           |
|---|----|----------|----------|------------|-----------|
|   | No | 7 (13)   | 4 (7.4)  | 43 (79.6)  | 54 (41.6) |
| <b>Total</b>  |    | 11 (8.5) | 10 (7.7) | 109 (83.8) | 130       |
| <b>Fisher's Exact Test=2.407, <math>\chi^2=2.418</math>, p=.299, df=2</b> |    |          |          |            |           |

\*Figures in parenthesis are percentages; p value <0.05 is significant.

Out of 76 retired subjects, 4 had no limitations; 6 had one limitation; 66 had more than 1 limitation. Similarly, out of 54 non-retired subjects, 7 had no limitations; 4 had one limitation; 43 had more than 1 limitation. The results came out to be statistically non-significant.

**Table 5: Analysis showing association of socio-economic status of elderly subjects with their functional limitations**

| Variables   |          | Functional Limitations |                   |                        | Total |
|---|----------|------------------------|-------------------|------------------------|-------|
|   |          | No Limita              | With 1 Limitation | More than 1 Limitation |       |
| Socio- Economic Stat  | Upper    | 1 (7.1)                | 2 (14.2)          | 11 (78.7)              | 14    |
|   | Upper Mi | 3 (7.7)                | 3 (7.7)           | 33 (84.6)              | 39    |
|   | Lower Mi | 3 (6.1)                | 4 (8.2)           | 42 (85.7)              | 49    |
|   | Upper Lo | 4 (16.6)               | 1 (4.2)           | 19 (79.2)              | 24    |
|   | Lower    | 0                      | 0                 | 4 (100)                | 4     |
| <b>Total</b>  |          | 11 (8.5)               | 10 (7.7)          | 109 (83.8)             | 130   |
| <b>Fisher's Exact Test=4.548, <math>\chi^2=4.379</math>, p=.821, df=8</b> |          |                        |                   |                        |       |

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically non-significant.

**Table 6: Analysis showing association of religion of elderly subjects with their functional limitations**

| Variables   |       | Functional Limitations |                   |                        | Total      |
|---|-------|------------------------|-------------------|------------------------|------------|
|   |       | No Limitation          | With 1 Limitation | More than 1 Limitation |            |
| Religion  | Sikh  | 10 (8.8)               | 10 (8.8)          | 94 (82.4)              | 114 (87.6) |
|   | Hindu | 1 (6.2)                | 0                 | 15 (93.8)              | 16(12.4)   |
| <b>Total</b>  |       | 11 (8.5)               | 10 (7.7)          | 109 (83.8)             | 130        |
| <b>Fisher's Exact Test=1.026, <math>\chi^2=1.722</math>, p=.423, df=2</b> |       |                        |                   |                        |            |

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically non-significant.

**Table 7: Analysis showing association of caste of elderly subjects with their functional limitations**

| Variables   |         | Functional Limitations |                   |                        | Total    |
|---|---------|------------------------|-------------------|------------------------|----------|
|   |         | No Limita              | With 1 Limitation | More than 1 Limitation |          |
| Caste   | SC      | 9 (7.7)                | 9 (7.7)           | 99 (84.6)              | 117 (90) |
|   | OBC     | 1 (14.3)               | 1 (14.3)          | 5 (71.4)               | 7 (5.3)  |
|   | General | 1 (16.6)               | 0                 | 5 (83.4)               | 6 (4.7)  |
| <b>Total</b>  |         | 11 (8.5)               | 10 (7.7)          | 109 (83.8)             | 130      |
| <b>Fisher's Exact Test=3.080, <math>\chi^2=1.834</math>, p=.766, df=4</b> |         |                        |                   |                        |          |

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically non- significant.

**Table 8: Analysis showing association of earning status of elderly subjects with their functional limitations**

| Variables |     | Functional Limitations |                   |                        | Total     |
|-----------|-----|------------------------|-------------------|------------------------|-----------|
|           |     | No Limita              | With 1 Limitation | More than 1 Limitation |           |
| Earning   | Yes | 4 (11.8)               | 5 (14.7)          | 25 (73.5)              | 34 (26.1) |
|           | No  | 7 (7.3)                | 5 (5.2)           | 84 (87.5)              | 96 (73.9) |
| Total     |     | 11 (8.5)               | 10 (7.7)          | 109 (83.8)             | 130       |

**Fisher's Exact Test=3.735,  $\chi^2=4.122$ , p=.127, df=2**

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically non- significant.

**Table 9: Analysis showing association of financial support status of elderly subjects with their functional limitations**

| Variables         |     | Functional Limitations |                   |                        | Total     |
|-------------------|-----|------------------------|-------------------|------------------------|-----------|
|                   |     | No Limita              | With 1 Limitation | More than 1 Limitation |           |
| Financial Support | Yes | 10 (14.9)              | 6 (8.9)           | 51 (77.2)              | 67v(51.5) |
|                   | No  | 1 (1.6)                | 4 (6.4)           | 58 (92)                | 63 (48.5) |
| Total             |     | 11 (8.5)               | 10 (7.7)          | 109 (83.8)             | 130       |

**Fisher's Exact Test=8.345,  $\chi^2=8.098$ , p=.017, df=2**

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically significant.

**Table 10: Analysis showing association of total family members of households with functional limitations of elderly subjects**

| Variables            |        | Functional Limitations |                   |                        | Total     |
|----------------------|--------|------------------------|-------------------|------------------------|-----------|
|                      |        | No Limitation          | With 1 Limitation | More than 1 Limitation |           |
| Total Family Members | 1-5    | 3 (6.2)                | 4 (8.3)           | 41 (85.5)              | 48 (36.9) |
|                      | 6-11   | 8 (10.5)               | 6 (7.9)           | 62 (81.6)              | 76(58.4)  |
|                      | 12- 18 | 0                      | 0                 | 6 (100)                | 6(4.7)    |
| Total                |        | 11 (8.5)               | 10 (7.7)          | 109 (83.8)             | 130       |

**Fisher's Exact Test=0.943,  $\chi^2=1.907$  p=.753, df=4**

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically non-significant.

**Table 11: Analysis showing association of marital status of elderly subjects with their functional limitations**

| Variables                 |                         | Functional Limitations |                   |                    | Total     |
|---------------------------|-------------------------|------------------------|-------------------|--------------------|-----------|
|                           |                         | No Limitation          | With 1 Limitation | More than 1 Limita |           |
| Marital Status of Elderly | Married- Spouse Present | 9 (11)                 | 10 (12)           | 63 (77)            | 82 (63)   |
|                           | Married- Spouse Absent  | 0                      | 0                 | 1 (100)            | 1 (0.7)   |
|                           | Married-                | 2 (4.4)                | 0                 | 43 (95.6)          | 45 (34.9) |

|   |                      |          |          |            |         |
|---|----------------------|----------|----------|------------|---------|
|   | <b>Widowed</b>       |          |          |            |         |
|   | <b>Never Married</b> | 0        | 0        | 2 (100)    | 2 (1.4) |
|   | <b>Total</b>         | 11 (8.5) | 10 (7.7) | 109 (83.8) | 130     |
| <b>Fisher's Exact Test=12.61, <math>\chi^2=8.889</math>, p=.180, df=6</b> |                      |          |          |            |         |

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically non-significant.

**Table 12: Analysis showing association of education level of elderly subjects with their functional limitations**

| Variables  |                                 | Functional Limitations |                   |                        | Total     |
|--|---------------------------------|------------------------|-------------------|------------------------|-----------|
|  |                                 | No Limita              | With 1 Limitation | More than 1 Limitation |           |
| Education Level of Elderly   | <b>Illiterate</b>               | 5 (6)                  | 7 (8.3)           | 72 (85.7)              | 84(64.6)  |
|  | <b>Primary School</b>           | 3 (16.6)               | 2 (11.1)          | 13 (72.3)              | 18 (13.8) |
|  | <b>Middle School</b>            | 1 (11.1)               | 0                 | 8 (88.9)               | 9 (6.9)   |
|  | <b>High School</b>              | 1 (6.6)                | 1 (6.6)           | 13 (86.8)              | 15 (11.5) |
|  | <b>Intermediate or Diploma</b>  | 0                      | 0                 | 2 (100)                | 2 (1.6)   |
|  | <b>Graduate or Postgraduate</b> | 1 (50)                 | 0                 | 1 (50)                 | 2 (1.6)   |
| <b>Total</b>   |                                 | 11 (8.5)               | 10 (7.7)          | 109 (83.8)             | 130       |
| <b>Fisher's Exact Test=7.235, <math>\chi^2=8.477</math>, p=.582, df=10</b> |                                 |                        |                   |                        |           |

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically non-significant

**Table 13: Analysis showing association of presence of chronic health conditions in the elderly with their functional limitations**

| Variables  |            | Functional Limitations |               |                        | Total     |
|--|------------|------------------------|---------------|------------------------|-----------|
|  |            | No Limitation          | With 1 Limita | More than 1 Limitation |           |
| Presence of Chronic Health Condition                                     | <b>No</b>  | 4 (9.7)                | 3 (7.3)       | 34 (83)                | 41 (31.5) |
|  | <b>Yes</b> | 7 (7.9)                | 7 (7.9)       | 75 (84.2)              | 89 (68.5) |
| <b>Total</b>   |            | 11 (8.5)               | 10 (7.7)      | 109 (83.8)             | 130       |
| <b>Fisher's Exact Test=0.282, <math>\chi^2=.136</math>, p=.934, df=2</b> |            |                        |               |                        |           |

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically non-significant

**Table 14: Analysis showing association of caregiver burden with functional limitations of the elderly**

| Variables               |                            | Functional Limitations |                   |                        | Total     |
|-------------------------|----------------------------|------------------------|-------------------|------------------------|-----------|
|                         |                            | No Limitation          | With 1 Limitation | More than 1 Limitation |           |
| <b>Caregiver Burden</b> | <b>Little or No Burden</b> | 3 (21.4)               | 4 (28.6)          | 7 (50)                 | 14 (10.7) |

|  |                                  |          |          |            |           |
|--|----------------------------------|----------|----------|------------|-----------|
|  | <b>Mild to Moderate Burden</b>   | 7 (9)    | 6 (7.7)  | 65 (83.3)  | 78 (60)   |
|  | <b>Moderate to Severe Burden</b> | 1 (2.9)  | 0        | 33 (97.1)  | 34 (26.1) |
|  | <b>Severe Burden</b>             | 0        | 0        | 4 (100)    | 4 (3.2)   |
|  | <b>Total</b>                     | 11 (8.5) | 10 (7.7) | 109 (83.8) | 130       |
| <b>Fisher's Exact Test=14.936, <math>\chi^2=17.974</math> p=.006, df=6</b> |                                  |          |          |            |           |

\*Figures in parenthesis are percentages; p value <0.05 is significant.

The results came out to be statistically significant.

## DISCUSSION

In our study, it was observed that majority of the subjects were females (52.3%). In a study conducted by Brinda EM et al in a rural indian community, majority of the study participants were females (54.6%).<sup>8</sup> In the current study, it was established that majority of the study participants belonged to the age group of 60-80 years (96.2%). In a study conducted by Mishra S et al in Western India, majority of the study participants belonged to age group of 60-65 years (72.17%).<sup>1</sup> The current study established that majority of the subjects were suffering from a pre-existing medical condition (68.4%). The various health conditions included diabetes, hypertension, joint pains, stroke etc. In a study conducted by Amonkar P et al, it was reported that majority of the study participants were suffering from hypertension (52.5%), joint pain (38.33%) etc.<sup>9</sup> Our study depicted that majority of the care givers provided assistance to the elderly in their Instrumental Activities of Daily Living domain (94.6%). In a study conducted by Keshari P et al, it was reported that 41.23% of the elderly subjects required assistance with their activities of daily living domain.<sup>10</sup>

The present study showed that majority of the caregivers provided assistance to the elderly for 0-6 hours of their daily activity care (62.3%). In a study conducted by Rosaria Di Lorenzo et al, it was reported that majority of the caregiving time was around 7.58 hours for the subjects.<sup>11</sup>

In our study, it was observed that as per the profiling of caregivers, majority of them were married with their spouse present (82.3%), they were illiterate (33.8%) and employed in a skilled occupation (50%). In a study conducted by Rosarito Clari et al, it was reported that majority of the caregivers were in a relationship, living with their partner (51.5%), educated upto primary school (63.6%) and were financially contributing to their household being employed (74.2%).<sup>12</sup> In the present study, it was established that majority of the subjects could perform the activities of various functional domains unassisted (89.8%). In a study conducted by Keshari P et al, it was reported that prevalence of functional disability was 53.6%, restriction in activities of daily living domain with maximum severity was observed in 13.5% of study participants. In the self-care domain, no ADL was affected in 84.58% of cases.<sup>10</sup> Another study conducted by Pengpid S et al reported that prevalence of atleast one difficulty in ADL was 23.8%, while IADL difficulty was 48.4%.<sup>13</sup> In our study, it was observed that majority of the caregivers experienced mild to moderate burden (60%). In a study conducted by Gabriel IO et al, it was reported that majority of the caregivers experienced high level of burden (86.7%).<sup>14</sup> The current study depicted that functional limitations were associated with financial support status of elderly subjects and caregiver burden. In a study conducted by Pengpid S et al, using adjusted logistic regression, it was reported that older age, and food insecurity were positively and male sex and having a health insurance were negatively associated with both ADL and IADL difficulty. No formal education was positively and urban residence and married were negatively associated with IADL difficulty.<sup>13</sup>

## LIMITATIONS

- The caregivers, when asked about their caregiver burden, were very guarded in giving their responses. Some of them had to be asked repeatedly as to elucidate a proper response.
- The elderly were not that much aware about their pre-existing medical condition and could mostly just tell about either hypertension or diabetes mellitus.
- Female caregivers (especially daughter-in-laws) weren't that much vocal about their true burden. They were mostly apprehensive to answer questions due to presence of their elderly in-laws. This could have lead to bias in results.

## Recommendations



- The caregivers need to develop a better sense of understanding towards the elderly and assist them in most of the activities.
- The caregivers should be thoroughly sound regarding the pre-existing medical condition of the elderly. This can significantly lead to improvement in the care.
- The caregivers need to take care of their own mental health, while taking care of the elderly.
- The elderly were mostly unaware regarding any benefits or schemes being run by the Government for their welfare. They need to develop some knowledge on this and act upon improving their health status.
- Health conditions like diabetes, hypertension etc need to be better managed so that there is less chance of complications arising and the elderly don't suffer.
- Female caregivers need to be more pro-active and vocal regarding assisting in the care of elderly.
- There is a need of formal training for the caregivers.

#### CONCLUSION

The present study concluded that Financial Support status of the elderly and Caregiver burden were found out to be statistically significant with functional limitations.

#### REFERENCES

1. Bains P, Minhas AS. Profile of home-based caregivers of bedridden patients in North India. *Indian J Community Med.* 2011;36(2):114–9.
2. Government of India. Elderly in India 2021. Minist Stat Program Implementation, Natl Stat Off Soc Stat Div [Internet]. [cited 2023 Jan 22].2021;1-137. Available from: [https://mospi.gov.in/web/mospi/reports-publications.%0Ahttp://mospi.nic.in/sites/default/files/publication\\_reports/Elderly in India 2021.pdf](https://mospi.gov.in/web/mospi/reports-publications.%0Ahttp://mospi.nic.in/sites/default/files/publication_reports/Elderly%20in%20India%202021.pdf)
3. Gupta AA, Lall AK, Das A, Saurav A, Nandan A, Shah D, et al. Health and socioeconomic status of the elderly people living in Hilly areas of Pakhribas, Kosi Zone, Nepal. *Indian J Community Med* 2016;41(4):273-9.
4. Swaroop N, Ravi S, Goud BR, Archana M, Pius TM, Pal A et al. Burden among Caregivers of Mentally- Ill Patients : A Rural Community - Based Study. *Int J Res Dev Heal.* 2013;1(2):29–34.
5. Misra S, Oswal R, Patel M. Family burden in caregivers of elderly with cognitive impairment residing in rural and tribal population of a district in Western India – A baseline study. *Indian J Community Med.* 2020;45(4):445-7.
6. Nagarkar A, Gadkari R, Kulkarni S. Correlates of functional limitations in midlife: a cross-sectional study in middle-aged men (45–59 Years) from Pune. *J Midlife Health.* 2020;11(3):144–8.
7. Baby MP, Chacko ST, Seetharaman B, Patil AK. Burden and quality of life among caregivers of patients with Parkinson's disease. *Indian J Cont Nsg Edn* 2021;22(1):47-52.
8. Brinda EM, Rajkumar AP, Enemark U, Attermann J, Jacob KS. Cost and burden of informal caregiving of dependent older people in a rural Indian community. *BMC Health Serv Res.* 2014;14(1):1–9.
9. Amonkar P, Mankar MJ, Thatkar P, Sawardekar P, Goel R, Anjenaya S. A comparative study of health status and quality of life of elderly people living in old age homes and within family setup in Raigad District, Maharashtra. *Indian J Community Med.* 2018;43(1):10–3.
10. Keshari P, Shankar H. Prevalence and spectrum of functional disability of urban elderly subjects: A community-based study from Central India. *J Fam Community Med* 2017;24(2):86-90.
11. Di Lorenzo R, Gironi A, Panzera N, Fiore G, Pinelli M, Venturi G et al. Empathy and perceived burden in caregivers of patients with schizophrenia spectrum disorders. *BMC Health Serv Res.* 2021;21(1):1–13.
12. Clari R, Headley J, Egger J, Swai P, Lawala P, Minja A et al. Perceived burden and family functioning among informal caregivers of individuals living with schizophrenia in Tanzania: a cross-sectional study. *BMC Psychiatry.* 2022;22(1):1–12.
13. Pengpid S, Peltzer K. Perceived age discrimination among older adults in India: Results of a national survey in 2017-2018. *Soc Heal Issues among Older Adults India.* 2021;7(1):18–25.
14. Gabriel IO. Caregiver Burden Among Informal Caregivers of Women with Breast Cancer. *Biomed J Sci Tech Res.* 2019;15(3):11384–92.