Survey of Care-Givers' Awareness and Perception of Geriatric Population

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Abstract

Worldwide, advances in medical sciences including progress of development of innovative technology have ushered in a new era of increased Life expectancy. India is no exception. The average Life expectancy of males and females at birth in India has increased from 62.3 years in 2001-2005 to 67.3 years in 2014-2015 amongst males and from 63.9 in 2001-2005 to 69.6 in 2011-2015 amongst females. The objective of the study is generally to understand the need of the aged people and understanding of those needs by their respective care- givers who may be any member of the family. There were no differences between the awareness and old age problems with that of care-givers. The awareness of the family CG among the semi-urban population is commensurate with the mitigation of the health problems of the GI. It is desirable to validate the above-mentioned conclusion by performing a multi-centric

Key words: Geriatrics, Care-givers, Awareness, Perception, Health

Introduction

Worldwide, advances in medical sciences including progress of development of innovative technology have ushered in a new era of increased Life expectancy. India is no exception. The average Life expectancy of males and females at birth in India has increased from 62.3 years in 2001-2005 to 67.3 years in 2014-2015 amongst males and from 63.9 in 2001-2005 to 69.6 in 2011-2015 amongst females. The biological age and the chronological age need not coincide. The demarcation of adulthood and old age is arbitrary. Generally old age starts when an adult has completed raising children and completed active life (e.g., retired) and no longer a major earning member except pension. For making the manuscript simple and avoid repetitions, the geriatric population will henceforth be called "GI" as opposed to care-givers will be referred to as "CG".

The objective of the study is generally to understand the need of the aged people and understanding of those needs by their respective care- givers who may be any member of the family.

Material and Methods

Subjects: The present study enrolled a total of 44 GI comprising of 32 (72.73%) males and 12 (27.27%) females. The GI was defined when a person reached the age of 65 years or more. A pre-designed and pre-tested proforma was administered to the GI by trained health workers and the findings were recorded. The population included the GI living in families which were either nuclear or having several members. The CG comprised of the spouses, and the children or any other category taking care of the family elders.

Information regarding the age, sex, occupation, educational background, source of income, and state of dependency in the family. Initial signs and symptoms of old age were carefully observed and were recorded by using the proforma. The various diseases of GI and their medication history were gathered.

Study Area: The study was carried out in a semi-urban area having a mixed population of agro-industry.

Characteristics of the Geriatric group: The group consisted economically dependent and independent individuals.

Statistical analysis: Statistical analysis is done with MS Excel and statistical software R. All tests are large sample tests. Comparisons between categorical variables were performed using Fisher's exact test for count data and Pearson's Chi-square test for equality of proportions. Other tests used were Wilcoxon rank sum test (equivalent to Mann-Whitney test), Kruskal-Wallis rank sum test and Spearman rank correlation test. *P*-value less than 0.05 were considered significant.

Ethics: The confidentiality and privacy of the participants were scrupulously maintained.

Results

The findings have been summarized in the following tables.

Insert Table-1

Insert Table-2

Insert Table-3

Insert Table-4

Insert Table-5

Insert Table-6

Discussion

The survey carried out on 44 GI to study different types of problems people are usually having at their old age. One geriatric is having no care-givers other than him-self and as such awareness of CG of respective GI toward different old aged problem is studied on 43 cases.

Various diseases like Diabetes, Hypertension, Coronary artery disease and Dyslipidemia are common among our GI. Besides, the most troublesome afflictions like Dementia and Prostatic Enlargement are noteworthy. Knowledge of their early presence is crucial to control and initiate treatment which is cost-effective and affordable and mitigates economic burden on the individual as well as CG. Presumably late detection usually makes the treatment complicated and in spite of the best treatment, efforts and expenses, the desired results are not achieved.

In the metropolitan cities, due to presence of modern infrastructure, it is possible to access various facilities for early detection of the GI diseases. It is also understandable that the level of education and economic status being higher as compared to the prevailing condition in the districts influences awareness of family care-givers about the physical and psychological condition of their GI relatives.

CGs' awareness over geriatrics belonging to Nuclear family and Joint family differ significantly (85.85% vs. 92.95% P-value 0.026).

CG is more aware to their family geriatrics living in Joint family rather than in Nuclear family (P value 0.01307, one sided test value).

The awareness varies significantly over GI having different sources of health care expenses (P value 0.014).

CG' awareness on geriatrics having Savings/Pension and others as sources of health care expenses do not differ significantly (91.90% vs. 96.00% P value 0.31).

But the awareness differ significantly (83.35% vs. 91.90% P value 0.0295) over GI having Insurance /Re-imbursement as source of health care expenses and also over GI having Insurance/Re-imbursement and others as source of health care expenses (83.35% vs. 96.00% P value 0.0072).

CG' awareness over GI belonging to different age groups (60-64 years, 65-69 years, 70-74 years and 75 years and above) do not differ significantly (P-value 0.198). Pearson's product moment correlation (sample correlation coefficient) coefficient between age of GI and Concordance Score is -0.059 and there is no correlation between concordance scores (obtained from GI and their CG) and age of geriatrics (P value 0.7053).

The present study highlights that the awareness of the family CG among the semi-urban population is commensurate with the mitigation of the health problems of the GI as evident from the statistical significant association between the two groups. The limitation of the study is its small sample size and representativeness of the entire country. Therefore, it is suggested that multi-centric similar studies should be carried out to generalize the outcome of this study.

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Annexure

Table – 1: Distribution of GI according to age group, mental status and educational background

Parameters	Male (n=32)	Female (n =12)
Age group		
60-64 years	2 (6.25%)	2 (16.67%)
65-69 years	*6 (18.75%)*	*3 (25.00%)*
70-74 years	11 (34.38%)	0 (0%)
≥ 75 years	13 (40.62%)	7 (58.33%)
Marital Status		
Living with spouse	25 (78.12%)	6 (50.00%)
Not living with spouse	7 (21.88%)	6 (50.00%)
Educational Background		
No Formal Education	3 (9.38%)	6 (50.00%)
Level 12 and below	17 (53.12%)	4 (33.33%)
Graduate & above	12 (37.50%)	2 (16.67%)

It is observed that 40.62% of male and 58.33% of female geriatrics are of age 75 years and above and 78.12% of male GI living with their spouse.

Table 2: Distribution of GI according to source of income, type of family, status in family and occupation

Parameters	Male (n=32)	Female (n =12)
Source of Income		
Pension /No other source	22 (68.75%)	10 (83.33%)
Other source (business, income from property etc.)	10 (31.25%)	2 (16.67%)
Family Type		
Nuclear	10 (34.48%)	2 (16.67%)
Joint	19 (65.52%)	10 (83.33%)
Status in Family		
Independent	6 (19.35%)	0 (0%)
Partially Dependent	15 (48.39%)	3 (25.00%)
Dependent	10 (32.26%)	9 (75.00%)
Occupation		
Retired from service	23 (71.88%)	2 (16.67%)
Not retired	4 (12.50%)	2 (16.67%)
Others	5 (15.62%)	8 (66.66%)

The table shows summarized distribution of Geriatric individuals according to source of income, type of family, status in family and occupation. Majority of male, 25 (78.12%) and females 6 (50.00%), are living with their spouses.

Table 3: Distribution of GI according to sources of health care expenses and type of CG

Parameters	Male (n=32)	Female (n =12)
Source of Health Care Expenses		
Savings /Pension	18 (56.25%)	4 (33.33%)
Insurance /Reimbursement	6 (18.75%)	6 (50.00%)
Others	8 (25.00%)	2 (16.67%)
CG		
Self CG	1 (3.13%)	0 (0%)
Spouse /Children	29 (90.62%)	13 (100%)
Spouse	12 (37.50%)	2 (16.67%)
Relatives only	1 (3.13%)	0 (0%)
Others (Maid) only	1 (3.13%)	0 (0%)

The table depicts the distribution of GI according to sources of health care expenses and type of CG. Source of Health Care Expenses of majority of geriatric persons comes from their pension.

Table 4: **Distribution of old aged problems in GI**

Sl. No.	Usual characteristics	Male (n=32)	Female (n = 12)	P value (both sided)
1	Forget People's Name	17 (53.13%)	8 (66.67%)	0.6413
2	Ask same question over and over again	19 (59.38%)	5 (41.67%)	0.4773
3	Forget to Eat	6 (18.75%)	4 (33.33%)	0.4218
4	Not able to find the right word	22 (68.75%)	9 (75.00%)	1
5	Take longer time to learn new things	23 (71.88%)	8 (66.67%)	0.7266
6	Get lost in familiar places	8 (25.00%)	3 (25.00%)	1
7	Not able to follow the right directions	11 (34.38%)	3 (25.00%)	0.7222
8	Forget where things like keys etc. are kept	30 (93.75%)	11 (91.67%)	1
9	Get confused over time, people and place	19 (59.38%)	6 (50.00%)	0.735
10	Forget what he/she has come into a room to do	14 (43.75%)	7 (58.33%)	0.5037
11	Have poor judgment about safety*	31 (96.88%)	12 (100%)	1
Having difficulties like (due to health /memory problem)				
12	Difficulty with bathing or showering	5 (15.63%)	4 (33.33%)	0.2274
13	Difficulty with managing money such as paying bills or keeping track of expenses	9 (28.13%)	5 (45.45%)	0.4753
14	Difficulty with walking for a distance say 300m a day	18 (56.25%)	8 (66.67%)	0.7328
15	Difficulty with pulling or pushing large objects such as a living room chair etc.	25 (78.13%)	10 (83.33%)	1
Having disease like followings				
16	Diabetes / High Blood Glucose	17 (53.13%)	7 (58.33%)	1
17	Chronic lung disease (limiting usual activities or making oxygen needed at home)	4 (12.50%)	1 (8.33%)	1
18	Congestive Heart Failure	8 (25.00%)	2 (16.67%)	0.7016
On Regular Medication				
19	Beta-Blocker Propranolol, Metoprolol etc.	2 (6.25%)	0 (0%)	1
20	Anti-Depressants	1 (3.13%)	0 (0%)	0.2727
21	Anti-Anxiety /Tranquilizer Benzodiazepines, Lorazepam, Alprazolam / Antihistamines Diphenhydramine etc.	0 (0%)	0 (0%)	1
22	Cholesterol Reducing drugs	7 (21.89%)	4 (33.33%)	0.4569
23	Blood sugar controlling drugs	11 (34.38%)	7 (58.33%)	0.1826
24	Living on regular medication	19 (59.37%)	7 (58.33%)	1

The table shows a comparison between male and female geriatrics with different old aged problems and reveals no significant difference between them. Test statistics done with Fisher's exact test for count data and Pearson chi-squared test statistic.

Table - 5: Distribution of old aged problems in GI and awareness of CG to the problems

Common old aged problems	Geriatrics with problem (n = 44)	Geriatrics with old aged problem having caregiver aware of it
Forget People's Name	25 (56.82%)	24 (100%)
Ask same question over and over again	24 (54.54%)	24 (100%)
Forget to Eat right and regularly	10 (22.73%)	9 (90.00%)
Not being able to find the right word sometimes	31 (70.45%)	29 (93.55%)
Take longer time to learn new things	31 (70.45%)	27 (90.00%)
Get lost in familiar places sometimes	11 (25.00%)	9 (81.82%)
Not able to follow the right directions	14 (31.82%)	9 (69.23%)
Forget sometimes where things like keys etc. are kept by himself /herself	41 (93.18%)	38 (95.00%)
Get confused over time, people and place	25 (56.82%)	18 (75.00%)
Forget what he/she has come into a room to do	21 (47.73%)	21 (100%)
With poor judgment about safety*	36 (81.82%)	34 (97.14%)
Having difficulties like (due to health /memory problem)		
Difficulty with bathing or showering	9 (20.45%)	6 (75.00%)
Difficulty with managing money such as paying bills or keeping track of expenses	14 (31.82%)	12 (85.71%)
Difficulty with walking for a distance say 300m a day	26 (59.09%)	25 (96.15%)
Difficulty with pulling or pushing large objects such as a living room chair etc.	35 (79.54%)	33 (97.06%)
Having disease like followings		
Diabetes / High Blood Glucose	24 (54.54%)	24 (100%)
Chronic lung disease (limiting usual activities or making oxygen needed at home)	5 (11.36%)	4 (80.00%)
Congestive Heart Failure	10 (22.73%)	9 (90.00%)
Living on regular medication	26 (59.09%)	24 (92.31%)

*Poor judgment about safety like- trip /slip / burning finger / frequently dropping object/ getting up from bed as "Lie-Stand-Up" at one go or not switching on light while entering into a dark room or climbing down stair case and so on.
The table summarizes the awareness of CGs to the old age related problems of their GIs.

**Table 6. Analysis of old aged related problems with respect to the awareness of the corresponding 6CG'
awareness to**

Characteristics of GI	Mean Concordance# score	P value (both sided)
Genders		
Male (n=31)	18.42 (92.10%)	0.121
Female (n=12)	17.25 (86.25%)	
On regular medication or not		
On regular medication (n = 24)	18.04 (90.20%)	0.878
Not on regular medication (n = 19)	18.18 (90.90%)	
Age groups		
60-64years (n=4)	16.75 (83.75%)	0.198
65 – 69 years (n =8)	18.37 (91.87%)	
70-74 years (n =11)	19.00 (95.00%)	
>75 years (n=20)	17.75 (88.75%)	
Status in Family		
Independent (n =7)	16.67 (83.35%)	0.213
Partially Dependent (n = 17)	17.76 (88.80%)	
Dependent (n =19)	18.74 (93.70%)	
Types of Family		
Nuclear Family (n = 12)	17.17 (85.85%)	0.026 **
Joint Family (n = 29)	18.59 (92.95%)	
Source of health Care expenses		
Insurance /Reimbursement (n=12)	16.67 (83.35%)	0.014**
Savings /Pension (n = 21)	18.38 (91.90%)	
Others (n = 10)	19.20 (96.00%)	
Living with their spouse or not		
Living with spouse (n =30)	17.83 (89.15%)	0.311
Not living with spouse (n= 13)	18.69 (93.45%)	

** P value less than 0.05

The table compares and summarizes the concordance score between the CG and their GI over different social and
economic criteria.