Indian Journal of
GERONTOLOGY

(a quarterly journal devoted to research on ageing)

Vol. 31 No. 3, 2017

Indian Journal of Gerontology
(A quarterly journal devoted to research on ageing)

ISSN : 0971–4189

SUBSCRIPTION RATES
Annual Subscription
US $ 80.00 (Including Postage)
UK £ 50.00 (Including Postage)
Rs. 600.00 Libraries in India
Free for Members

Financial Assistance Received from :
ICSSR, New Delhi

Printed in India at :
Aalekh Publishers
M.I. Road, Jaipur

Typeset by :
Anurag Kumawat
Jaipur

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Indian Journal of Gerontology
2017, Vol. 31, No. 3, pp. 239–247

Socio-Demographic Correlates of Body Mass Index among Retired Senior Citizens of Varanasi

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ABSTRACT

The purpose of this cross sectional study was to find out the factors affecting Body Mass Index of 410 elderly subjects aged 60 years and above. The data was collected with the help of Interview Schedule. Body Mass Index Scores of the respondents were calculated using Body Mass Index (BMI) formula (i.e. weight in kilograms/Height in meters see Carter et al., 2006) and other nutritional measurements like visceral fat and body age were obtained with the help of OMRON make Body Fat Analyzer Scale. The data were analyzed through SPSS 21.0 (trial version). The findings of the present study showed that Socio-Economic Status and Visceral fat were significantly associated with BMI ($p < 0.05$). Regression analysis of data revealed that Age, Sex and Visceral Fat are strong predictors for being at risk of overweight and Obese. On the basis of present findings the researchers can recommend policy makers to make intensive public health interventions to reduce the high prevalence of overweight among elder population so that they can maintain a (standard) normal BMI score and can lead a socially secure life.

Key words: Body mass index, Obesity, Depression, Socio-demographic factors.

Body mass index (BMI) is considered to be an indirect way to evaluate the general health of a person. It is a clinical parameter derived from height and weight. It can be used to reflect the general health status of a community. Individuals with a BMI over 30 are considered physically unhealthy, which puts them at risk for serious illnesses such as heart disease, diabetes, high blood pressure, gall bladder disease, and some type of cancer (Campbell and Haslam 2004). Overweight and obesity are the fifth leading risk factor for global deaths. Once considered a problem of developed country, overweight and obesity are now on the rise even in developing countries, particularly in urban settings. Globally, the elderly population is increasingly becoming obese (Carter *et al*., 2006).

Central obesity in the elderly population of India is a major public health problem and this phenomena existing in India called as Metabolic disease. Projection indicates that by the year 2020, there will be 470 million people aged 65 years and above in developing countries, which will be more than double the number of cases of developed countries (Elaine *et al*., 2013).

Obesity can be seen just as one of a defined cluster of non communicable diseases (WHO, 1999). WHO recognizes obesity as the greatest health threat of 21st Century. The rapid rise in prevalence across the world has caught governments and health services by surprise, and the consequences are clearly evident. As per WHO, 2.8 million adults die each year directly or indirectly as a result of being overweight or obese (Gallagher and Gates 2006).

The increasing prevalence of overweight and obesity in elderly is a major public health concern and is associated with many other health problems and increased mortality. Many factors appear to contribute to the nutritional condition evidenced with aging. With respect to the high expenses of obesity treatment and its associated complications, Knowledge of the factors affecting BMI is essential to develop intervention programs. The present study was conducted to determine the association between Body Mass Index (BMI) and Socio-demographic factors in elderly population.

Methodology

The present cross sectional study was conducted to determine the association between BMI and Socio-demographic factors in Varanasi District of Uttar Pradesh. 410 Retired Employees (60 years & above) from Two Central Government Organisation of Varanasi City were enlisted for the study. This study was carried out from May to December 2015. A pre-designed and pre-tested Interview Schedule was used to interview the study participants to elicit the information on individual characteristics like age, sex, socio-economic status, etc. The responses of the subjects were noted during the time of data collection. Data was entered, tabulated and analysed using the SPSS 21.0 (trial version).

BMI was calculated by formula – a person's weight in kilograms was divided by the square of the height in meters (Kg/m2). Respondents were divided in four category according to their BMI using 'The International Classification of BMI' for adults: Underweight (<18.50), Normal (18.50–24.99), Overweight (=25.00), Obese (=30.00) Omron make Body fat analyzer scale HBF–200 was used to measure BMI, Body Age & Visceral Fat. (Body age is a measurement of how old you are biologically based upon your health, life style and fitness level as opposed to what your birth certificate indicates.)

Results

Table 1
Socio Demographic Profile of the Respondents

Socio-Demographic Variables		*Respondents (N=410)*	
		No.	*Proportion (%)*
Age	60–64	75	18.3
	65–69	139	33.9
	70–74	150	36.6
	75 & Above	46	11.2
Sex	Male	373	91.0
	Female	37	9.0
Family Structure	Nuclear	158	38.5

Cont'd...

Cont'd...

	Joint	252	61.5
Socio-Economic Status	Upper Class	298	72.7
	Upper Middle Class	89	21.7
	Middle Class	19	4.6
	Lower Middle Class	4	1.0
Marital Status	Married	341	83.2
	*Widow/Widower	69	16.8
BMI	Underweight	6	1.5
	Normal	207	50.5
	Overweight	188	45.9
	Obese	9	2.2
Visceral Fat	Below 13%	228	55.6

* one unmarried respondent was merged for calculation

A total of 410 retired employees (373 males and 37 females) were randomly selected for this study. Among them 18.3 per cent respondents were between age group of 60–64 years, 33.9 per cent between 65–69 years and 36.6 per cent were 70–74 years and 11.2 per cent were 75 and above. Mean age of the respondents was 69.04 ± 4.763.

Socio-Economic Status of the respondents depict that most of them belonged to upper class (72.7%) and only 1.0 per cent were from Lower Middle Class. Majority of the respondents had Joint Family Structure (61.5%). More than half of the respondents (55.6%) were having Visceral Fat below 13 per cent which indicate that they are not in a danger zone to have serious illness while in 44.4 per cent of the respondents the visceral fat was found more than 13 per cent .

However, approximately half of the respondents (50.5%) were between normal range of BMI (18.5–24.9), 45.9 per cent were overweight (BMI 25.0 – 29.9), 1.5 per cent were underweight (BMI < 18.5) & 2.2 per cent were obese (BMI 30.0 and above). Mean BMI in the series was 24.4 with a Median of 24.5 & Mode of 23.0 and Standard Deviation ± 3.17. Mean Body Age of respondents was 61.15 ± 8.118, whereas Minimum body age was found to be 36 years and Maximum 80 years.

Table 2
Socio-demographic Correlates of BMI

Variables		*BMI (N=410)*				
		Normal and Underweight		*Overweight and Obese*		
		No.	*(%)*	*No.*	*(%)*	
Age group (in years)	60–64	36	48.0	39	52.0	x2= 6.08
	65–69	66	47.5	73	52.5	df = 3
	70–74	80	53.3	70	46.7	P Value = .107
	75 & Above	31	67.4	15	32.6	
Sex	Male	195	52.3	178	47.7	x2 = .17
	Female	18	48.6	19	51.4	df = 1
						P Value = .673
Family Structure	Nuclear	84	53.2	74	46.8	x2 =.15
	Joint	129	51.2	123	48.8	df = 1
						P Value =.697
Socio-Economic Status	Upper Class	142	47.7	156	52.3	x2 = 9.36
	Upper Middle Class	54	60.7	35	39.3	df = 3
	Middle Class	14	73.7	5	26.3	P Value = .025*
	Lower Middle Class	3	75.0	1	25.0	
Marital Status	Married	170	49.9	171	50.1	x2=3.57
	#Widow/Widower	43	62.3	26	37.7	df = 1
						P Value = .059
Visceral Fat	Below 13%	199	87.3	29	12.7	x2 = 256.8
	Above 13%	14	7.7	168	92.3	df = 1
	Total	213	52.0	197	48.0	P Value= .000*

one unmarried respondent was merged in this group.

* Significant at 0.05 confidence level.

Table 2 indicates that more than half of the respondents (52.0%) from age group 60–64 and (52.5%) of age group 65–69 are falling under the category of Overweight & Obese and as the age of the respondents is increasing the percentage of the Overweight respondents is decreasing. However, no significant association was found between Age and BMI.

The Prevalence of Overweight and Obese was found slightly higher in women (51.4%) in comparison to men (47.7%). Data indicates that Sex of the respondents and BMI are not significantly associated. Data also reveals clearly that the structure of family has no effect on BMI.

As per the Socio-economic status of the respondents is concern, the data presented above shows that 52.3 per cent of the respondents from Upper Class are found overweight & Obese and 75.0 per cent of the respondents from Lower Middle Class are having Normal weight. Hence, it is concluded that there is association between Socio-Economic Status and BMI.

Data of Visceral fat indicates that there is a significant association between Visceral Fat and BMI as it shows that majority of the respondents (87.3%) whose visceral fat is below 13 per cent are having normal score of BMI. On the other part majority of the respondents (92.3%) whose visceral fat is found above 13 per cent are having higher scores of BMI and falling under the category of overweight and Obese. As far as the marital status of the respondents is concern data shows that married respondents have higher level of BMI as compared to Widow/Widower but there is no significant association between Marital Status and BMI.

Table 3

Regression Analysis of the Socio-demographic Correlates of Overweight and Obesity

	Variables	*OR*	*95% CI*	*P-value*
Age	60–64	11.09	2.56–47.98	.001*
	65–69	3.44	.88–13.44	.075
	70–74	1.77	.48–6.44	.383

Cont'd...

Cont'd...

	75 & Above (ref)			
Sex	Male	.24	.09–.62	.003*
	Female (ref)			
Family Structure	Nuclear	1.28	.58–2.80	.537
	Joint (ref)			
Socio-Economic Class	Upper Class	.60	.04–8.43	.709
	Upper Middle Class	.58	.04–8.42	.692
	Middle Class	.19	.00–4.30	.303
	Lower Middle Class (ref)			
Marital Status	Married	1.87	.66–5.27	.236
	Widow/Widower (ref)			

* Significant at 0.05 level

Age, Sex and Visceral Fat are strong predictors (table–3) for being at risk of overweight and Obese. The odds of being overweight and obese decreased as the age of the respondents increased. As data indicated persons in age-group of 60–64 were on higher risk of being overweight & Obese (OR = .11.09) as compared to higher age group of respondents. Men were less likely to be overweight compared with women (OR = .24). Risk of being overweight & obese was increased as per social class of the respondents is increased. Odds of being overweight was more in married person (OR = 1.87) in comparison to others. Visceral Fat also significantly associated with the risk of being overweight & obese. The odds of being overweight or obese were lowest among respondents who had below 13 per cent visceral fat (OR = .004)

Discussion

The main objective of the present study was to explore the association between socio-demographic factors and BMI status. The variables studied with reference to BMI were Age, Sex, Marital Status, Family Structure, Socio-Economic Status and Visceral Fat. Out of which statistically significant results has been found for Socio-Economic Status and Visceral Fat. No significant relationship was found with respect to Age, Sex, Marital Status, and Family Structure.

Gallagher Camden and Gates, (2006) in their study reported that prevalence of obesity was about 40 per cent among older Americans in the age group of 60–69, and 30 per cent of persons between ages 70–79 years. Same pattern of change in percentage was prevalent in the present study as per the data which showed that prevalence of overweight and obesity is decreased as the age of the respondent is increased. Data in the present study indicated that persons in age-group of 60–64 are on higher risk of being overweight and obese (OR=.11.09) as compared to 75 and above age group. Deterioration in health due to ageing could be a reason behind weight loss in the old age.

In the study it was found that 47.7 per cent of men and 51.4 per cent of women were overweight and obese respectively. Men were less likely to be overweight compared with women (OR=.24). (Singh *et al.,* 2004) in his study conducted at Delhi reported same pattern of findings, in which it was found that, in men the prevalence of overweight and obesity was 34 per cent and for women it was 40.3 per cent. (Carter *et al*., 2006), also stated the same pattern of findings in their study as the prevalence of obesity was found to be high for females (31%), when compared to male (11.9%).

Conclusion

In conclusion, nutritional inadequacy is prevalent in the elderly. The identification of nutritional status and related factors allows interventions directed to the real needs of the elderly population aimed at healthy ageing and quality of life for all. In light of this, there is a need to mount intensive public health interventions to reduce the high prevalence of overweight and obesity among elder population so that they can maintain a (standard) normal BMI score and can lead a socially secure life.

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Indian Journal of Gerontology
2017, Vol. 31, No. 3, pp. 248–260

Impact of Otago Exercise Intervention on Risk of Falls in Elderly in Rural Mysore District

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ABSTRACT

The present study was conducted to know the impact of Otago Exercise Intervention on risk of falls in the community in a village in Mysore district. 118 Community dwelling elderly people, aged 60 years and above, of rural Mysore district, were chosen for the study. A Pre-intervention measurement of the outcomes consisting of ABC scale, TUG test, Tinetti Balance Assessment tool and 6 MWD was done. At the end of six months of intervention, data analysis of outcome measures, using SPSS software version 20.0 and Pearson's rank correlation test, t-test and Paired t-tests were done. It was found that there was a significant change in the post intervention measurements of all the four outcome measures ($p < 0.05$). This research showed that Otago exercise is effective in reducing the risk of falls in the rural elderly. Hence, Otago exercise intervention is a feasible programme that can be implemented in the community in rural India.

Key words: Falls in the elderly, Injuries in elderly, Otago exercise intervention, Balance, Mobility.

A fall is defined as an event when a person unintentionally comes on the floor or a lower level than before. A fall may be the first indication of an undetected illness. Falls can be due to intrinsic factors

like postural instability, weakness, neurological conditions, cardiovascular instability, cognitive status, medications, and sensory decline or multifactorial. Falls can also be due to the result of extrinsic factors like environmental hazards like poor lighting, uneven, wet or icy surfaces, traffic or moving walkways or escalators (Harman, 1991)

There is also a dysfunction of neurological system due to cellular changes, including reduced co-ordination, memory, dementia and proprioceptive feedback from the vestibular, visual and somatosensory systems. Cardiovascular capacity declines with age. Cellular changes in the blood, such as a reduction in haemotocrit, changes in the heart including deconditioning and myocardial stiffening, or changes in the activity of the nodal or conducting cells, combine to reduce the maximum heart rate.

There is a decline in strength of muscles with ageing. Loss of strength in the elderly is directly associated with limited mobility and physical performance as well as the increased incidence of accidents suffered by those with muscle weakness and poor balance, leading to a progressive decrease in cross sectional area of muscle (Balcombe and Sinclair, 2001).

There is loss of movements of flexion and extension in the lumbar spine with age. There is loss of range in the ankle joint which becomes important when its contribution to dorsiflexion and plantarflexion is considered which is essential for strategies adopted in dynamic balance, activities done in sit to stand and in walking on flat or up and down hills or stairs.

Research suggests that the decrease is most evident in the back, trunk and proximal muscles of the lower limbs, affecting posture, gait and balance and creating a major risk for falls. This diminished ability to maintain balance may be associated with an increased risk of falling. In the older people, falls commonly lead to injury, a loss of independence, associated illness and early death (Jani and Rajkumar, 2006; NICE, 2013).

Preventing falls in the elderly is hence important because a fall leads to considerable mortality, morbidity, and suffering for older people and their families (Gardner, M. *et al*., 2000; Howe *et al*., 2004 and Tracey, *et al*., 2011).

Falls are common in India. Lack of Exercise, fitness and nutrition leads to gradual decrease in muscle strength, decrease in physical activity, therefore affects the balance, strength and functional capacity which can result in falls (*et al*., 2002, Krishnaswamy, and Gnanasambandam 2011,). There are many exercise interventions like balance training, strengthening programme and endurance training which have proved their effectiveness in improving physical fitness and reducing the fall (Takshashila *et al*., 2012 and CDC, 2015)

Otago exercise intervention includes all the components for improving balance, strength and functional capacity of elderly subjects. This is a home-exercise programme, combining strength and balance retraining exercises to prevent falls in older, community-dwelling people (Takshashila *et al*., 2012). It has been shown to be effective in reducing the number of falls and fall-related injuries by 35 per cent in community dwelling older adults and had the greatest impact in those aged 80 and older (Gillespie, *et al*., 2012, and Emilio, *et al.*, 2014). It is a set of exercises which is simple that can be followed by the rural community in India.

There are very few studies done to know the impact of Otago Interventions which have components of balance, strengthening and mobility in prevention of falls in the elderly rural population in India.

Objectives of The Study

To study the impact of Otago intervention on the risk of falls in the rural elderly

- To study increase in balance as a result of the Otago intervention.
- To study increase in mobility as a consequence of the Otago intervention.
- To study increase in functional capacity as a result of the intervention.

Methodology

Sample

For this cross sectional study 118 elderly aged 60 years and above were selected by convenience method of sampling method from Suttur and Hadinaru villages, about 24 kms from Mysore, Karnataka.

Only those elderly who scored less than 67 per cent on the Activity Specific Balance Confidence Scale (ABC) and whose 6 MWD was less than predicted distance for their age, sex and height were chosen for this study. Respondents who had unstable cardiac disease, recent fracture, stroke, uncorrected visual impairments, urinary incontinence, those using walking aids were excluded from the study.

Measures Used

Primary Outcome Measures

1. *Activities specific Balance Confidence (ABC) scale:* It is a subjective reporting questionnaire, indicating the level of confidence in performing functional tasks
2. *Monitoring of falls by subjective reporting:* at the end of each month.

Secondary Outcome Measures

1. *Timed up and go test (TUG):* is a test of mobility. The participant has to get up and walk from a chair, a distance of 3 metres and come back and sit on the chair. The total time in seconds is recorded. A score of more than 14 seconds is indicative of high fall risk in community dwelling older adults.
2. *Tinetti Balance Assessment Tool:* is a test to check balance. It consists of checking balance (16 score) and gait (12 score) of the participant and score noted down against a maximum of 28. A score of less than 18 is indicative of high risk of fall.
3. *Six minute walk distance:* this is the recording of the total distance that the participant is able to walk in 6 minutes and compared with predicted 6 minute distance of the participant according to the age, sex, height and weight.

Materials Used: Arm chair, Tape to measure, Stop watch, 15 metre walkway, Pulse ox meter, Sygpmomanometer, Stethoscope, Weights-sand bags, Couch and . Weighing machine

Procedure

Institutional ethical clearance was obtained from the JSS University. Permission was obtained from the Physicians of the

Primary Health Centres of Suttur and Hadinaru to conduct the study in the premises of the PHC. Written consent was taken from all the participants of the study. Pilot study was done prior to the commencement of the study to know if the intervention was feasible or it needed any modification. 118 participants out of 325 screened were chosen for the study according to the inclusion criteria. The outcome measures of ABC, TUG, Tinetti and 6 MWD was done as pre-intervention.

The Otago exercise intervention commenced in the month of July 2014. The participants performed a set of warm up exercises. Resistance exercises for quadriceps, hamstrings and hip abductors were given with resistance provided by sand bags of suitable weights according to the weight tolerated in performing 10 repetitions without fatigue.

Progression of resistance was by increasing the repetitions to 20 and then, increasing the weights, as per the Otago exercise intervention protocol. Balance retraining exercises consisted of a total of 12 exercises, initially done for 10 repetitions with support and progression to a set of 3 such 10 repetitions without support – Level A to D.

For the first three months, the participants were made to do all the strengthening and balance retraining exercises once a day, thrice a week under the supervision of the instructor. They were advised to walk at their own pace for 30 minutes a day, twice a week.

In the next three months, the participants were told to do the exercises in their homes, and continue walking for 30 minutes twice a week. A record of the number of days they performed the exercises was maintained by the community workers. Outcome evaluation of ABC scale, Tinetti balance assessment tool and TUG was done at the end of each month for upto 6 months. 6 MWD was recorded pre intervention and after six months of intervention.

Monitoring of falls was done by using a falls diary to record falls by subjective reporting at the end of each month.

Only one participant reported a fall in the first month of the study and withdrew from participation. 36 participants (39%) completed the study and there were 82 drop outs in the study (61%).

Data Analysis Spss software V20.0 was used and the outcome measures were analyzed using t-test and Paired t tests to compare the difference before and after completion of intervention.

Results

The Otago exercise programme done on the elderly participants of the community showed a significant change in the outcome measures of ABC, TUG, Tinetti scores and 6 MWD after six months of intervention.

A total of 36 participants completed the six months intervention of which, 15 were females and 21 were males, as indicated in table 3 below.

Table 3
Distribution of Male and Female Elderly Participants

Sex	*Number*	*Percentage*
Female	15	41.7
Male	21	58.3
Total	36	100.0

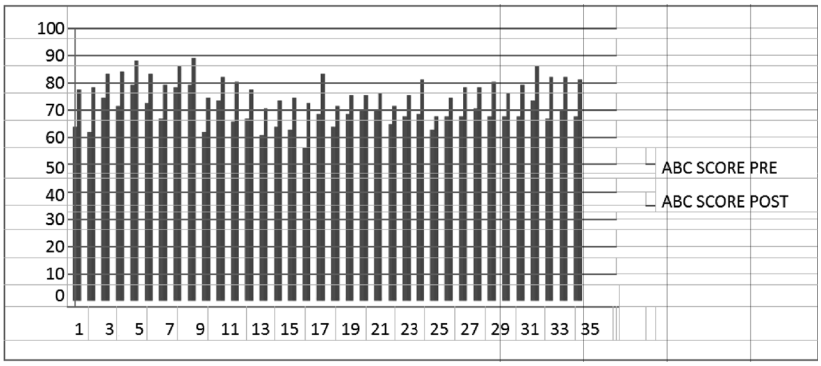
Table 4
Mean and SD of Participants' Age

	Minimum	*Maximum*	*Mean*	*SD*
Age of participants	60.0	87.0	70.0	7.59

Age group was between 60 and 87years, mean age was 70 years (SD = 7.59) Pre and Post intervention differences in outcome measures were done with the level of significance at 0.05.

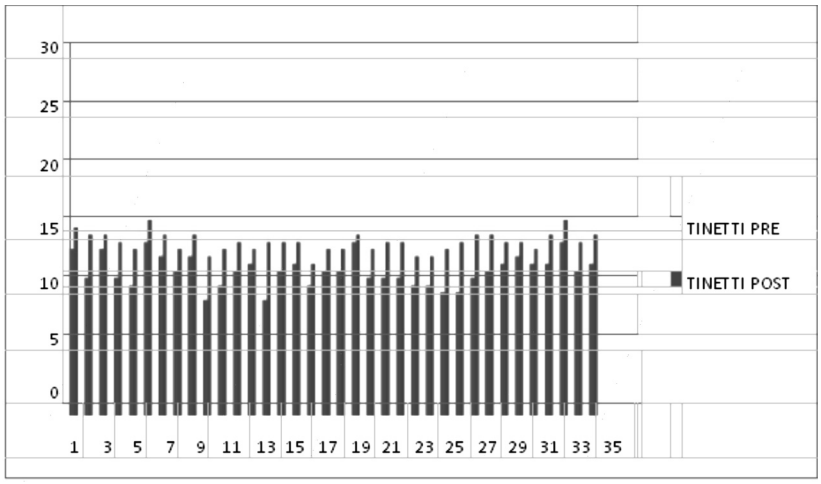
The paired samples t-test shows that there is a significant difference between the pre and post Otago exercise intervention, (p value $<=$ 0.001 for all the outcome measures performed). The mean difference shows that there was an effect of the Otago exercise on the participants. Hence, there is sufficient evidence to conclude that there is a significant effect of the Otago exercise on the participants.

Figure 1
Comparison of Pre and post 6 Months Scores of ABC scale



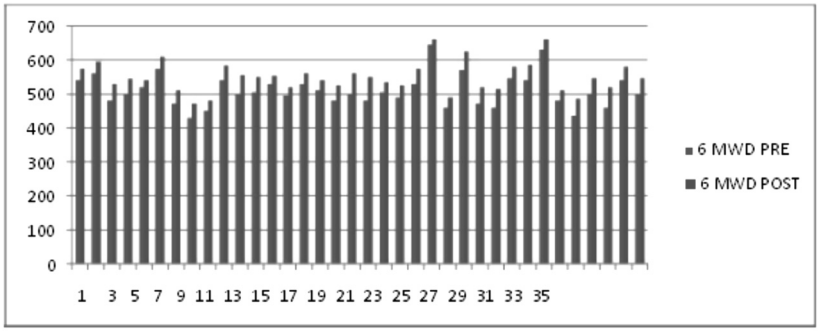
The mean scores of ABC scale showed an increase after 6 months of intervention, when compared with the pre scores of the participants, as seen in Figure 1.

Figure 2
Comparison of Pre and Post 6 Months Scores of Tinetti Balance Assessment tool



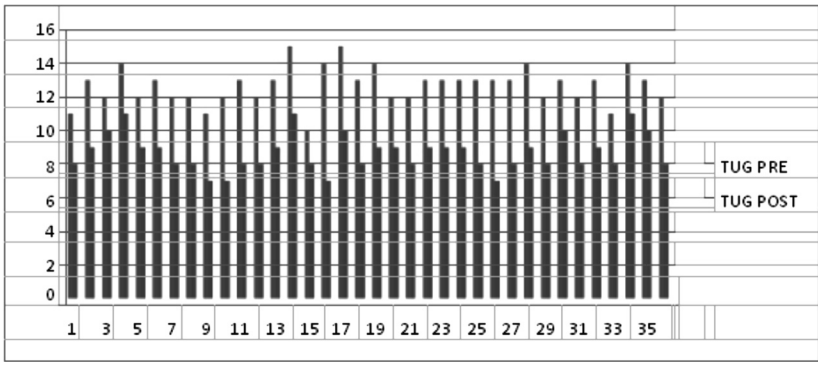
Pre and post 6 months intervention scores of Tinetti balance tool also showed an increase, as indicated in the figure 2.

Figure 3
Comparison of Pre and Post 6 Months Scores of 6 MWD



The 6 MWD mean scores from the baseline to the end of 6 months was increased, which is graphically represented in figure–3 below. 6 MWD showed was found to be clinically significant with a difference of 40.36 metres, more than the MDC value of 37 metres.

Figure 4
Comparison of Pre and Post 6 Months Scores of TUG Test



The TUG test the mean score from baseline to the end of 6 months was decreased, as represented in figure–4. The TUG showed a MDC of more than 3.22 seconds, but is slightly less than the value of 3.7 seconds to be clinically significant.

There was a significant difference ($p < 0.05$) in all the 4 outcome measures in males and females irrespective of age. Comparing the values between males and females below 70 years and above 70 years did not show any age related differences, as the $p = 0.00$ ($p < 0.05$) in both the age groups.

Discussion

This study shows that all the components of Otago intervention in the form of strength training, balance training and mobility training were effective in reducing the risk of falls in the elderly. Proprioceptive training in older population leads to an improvement in inter-intra-muscular co-ordination and dynamic balance. It decreases the reaction time in situations that leads to falls like walking over obstacles. This allows greater knee stability during static position and improves knee co-ordination and precision, thus improving ankle joint control and speed Yang, *et al.*, 2012).

Balance training improves mental and neural functioning which in turn improves motor functioning and balance (J. Beling and Roller M. 2009). It also trains central nervous system and sensory receptors to be more receptive to muscular length/tension relationships, weight shifts and range of motion. Similar results were found by number of studies which showed improved dynamic balance in older adults when trained with balance and strength training (Tatjana, *et al.*, 2007 and Erja, *et al.*, 2012).

It is proven that the participants who underwent resistance training had significant improvement in mobility and balance and reduction of falls (Alexander, *et al.*, 2011). In this study, resistance training using sandbags were given and progression was done with increase in weights, which could have added benefit of improving balance and reducing the risk of falls.

There are several studies that have been done on the effects of walking to prevent falls in the elderly. Walking has been shown to have many health benefits, even in later decades of life. The studies suggest that the effect of walking may be cofounded by the tendency to prescribe walking regimens in trials involving high-risk population.

It was postulated that multi-component programs that incorporated balance with walking are more efficient than prescribing balance alone in reducing the risk of falls in the elderly (Susie Thomas, *et al.*, 2010).

The Otago exercise intervention used in this study has combined components of strength training, balance training and walking. These components have shown a significant improvement and hence, have reduced the falls in elderly (Thomas, *et al.*, 2010 and Marie Louise *et al.,* 2013).

This study was intervened for six months which has shown significant improvement in balance, mobility, walking distance and thereby, has reduced the risk of falls.

The Otago exercise intervention programme which was done for a period of six months in the rural community to know the impact on falls in the elderly is a set of exercises which is very simple and easily understandable. It is also safe to make it feasible for the rural community in India.

Conclusions

This research study showed that Otago exercise is effective in improving balance and mobility in the rural elderly thereby decreasing the risk of falls. Thus, it had an impact on the risk of falls in the elderly. The Otago exercise intervention is a simple set of balance and strengthening exercises which was easy to follow by the rural community elderly. The application of Otago exercise is feasible in community.

Limitations of the Study

There were a large number of drop outs (82), adherence to the exercise was poor and there was no binding of instructor to participants, intervention and outcome measures which could have led to outcome assessor's bias.

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Indian Journal of Gerontology
2017, Vol. 31, No. 3, pp. 261–271

Altruistic Behaviour, Life Satisfaction and Spirituality in Geriatric Population Living with Families and Old Age Homes

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ABSTRACT

The aim of the present study was to understand the relationship between, altruistic behavior, life satisfaction and coping in geriatric population and compare with those living with families and old age homes. 60 elderly persons (30 elderly were living with families and 30 were living in old age homes) with age 60 years or above were selected randomly in this study. Altruistic Personality Scale', Satisfaction with Life Scale, Subjective Happiness Scale and Spirituality Scale (Delaney, 2003) were administered on them individually. The correlations between the scores of different scales, were calculated to bring out the relationship of altruism with life satisfaction and spirituality. Mann Whitney test was used to compare the two groups of elderly living in different settings. The findings of this study revealed that, altruism (p=0.01) and spirituality (p=0.001) were positively related to life satisfaction in the elderly living in with their families. On the other hand spirituality (p=0.001) and subjective happiness (p=0.001) were significantly better in the elderly inmates.

Key words: Altruism, Satisfaction, Coping, Geriatric Population

Ageing is the process of growing old, with a number of transitions in the journey of life. Ageing is challenging and at the same time

full of opportunities. If the elderly is active, he can enjoy his life without perceiving himself as aged. The elderly can enjoy going out and meeting people more frequently, which he was not able to do earlier because of the preoccupation with his work. He can focus more on his hobbies or he can spend time with his grandchildren. This apparently makes the people more prosocial with ageing.

Prosocial behaviors have been found to be both prevalent and salient among the elderly, in an informal context (Midlarsky & Kahana, 2007). The elderly people take care of their younger members within the family or outside the family, whenever they can. They also provide care to family members facing major illness (Fingerman, *et al.*, 2012). They also take care of their grand-children when other adults are not available at home for some reason (Hayslip *et al.*, 2006). Hence, after retirement they have ample time to get involved in prosocial activities.

It has been noticed that people who are more resourceful socially, physically, psychologically and financially are more engaged in prosocial or helping behaviours (Thoits & Hewitt, 2001). Those who are less in resources or lack it, are less involved in prosocial behaviors (Choi, 2003). The helping behaviors in late life also build their social capital and provide them further resources to cope with the adverse situations (Cornwell, 2011). The helping behaviors extensively contribute to mental health benefits (Musick & Wilson, 2008) and helps them live a healthy life. The resilience in elderly people depends upon the successful adaptation to manage stressful events. It is about changing the meaning, reducing the level of danger and negative reactions to adverse situations. It is about maintaining their positive self-esteem and self-efficacy (Kobasa, *et al.*, 1982). These factors may lead to proper life satisfaction and subjective happiness.

The elderly may not be satisfied and happy in their lives due to their age boundations. The older adults may also be vulnerable to losses like becoming or being physically weaker, economically impoverished, socially dependent, and humiliated or psychologically harmed (Chambers, 1989). There may be various negative life events like death of significant others, severe illness of significant others negative socio-economic circumstances, sudden unexpected events, negative events with relationships, daily hassles and abuse (Kraaij, *et al.,* 2002). In

geriatric population, loneliness, daily and chronic stress, lack of social support and mourning may be the cause of distress. Also, economical aspects such as retirement and job loss are major risk factors that may cause depression. Negative life events were reported to result in poorer mental health conditions in advanced age. It caused cumulative stressful events or traumas and many of these were left untreated too (Gameiro, *et al.*, 2014).

The older adults may experience loneliness because, they may be living alone, have poor family ties, may lack participation in the activities of their own culture and may have problems with sharing the local programs (Heikkinen, *et al.*, 1995). Having fewer social contacts or living alone does not itself indicate loneliness. In fact some older adults are happier with the people living outside their families and get more perceived support from them (Mullins, *et al.*, 1987). Also, it has been seen that older people prefer to be friendly with the people of their own age cohort. Those who have more intellectual, physical and material resources are found to have more social capital (Posner, 1995).

Personality is one of the major factors besides that include optimism, altruism, happiness, attitude towards life, motivation, meaningfulness, etc. The well-being of an older adult depends upon the personality they have. Personality is related to how individuals usually behave, have experiences, believe and feel toward themselves, others and the world (Neri, 2005). It has been found that the low levels of dominance and high levels of neuroticism has been found to be exhibiting more depressive symptoms in the elderly (Steunenberg, *et al.,* 2006). There are several studies that indicate that optimism and happiness contributes to healthy ageing. Vijayshri (2015) studied 300 participants from Delhi, India, between the age group of 60 to 85 years that optimism was found to be a predictor of healthy ageing. There was an association between positive well-being and mortality in both healthy and diseased population. The feelings of joy, happiness, greater satisfaction with life and sense of humor predicted longevity in older adults (Chida and Steptoe, 2008).

Spirituality is one of the aspects of humanity that becomes especially important in the old age. Spirituality refers to the way individuals seek and express meaning and purpose and the way they experience their connectedness to the moment, to self, to others, to

nature, and to the significant or sacred. (Puchalski, 2012). It is found in the integration of several deep connections: the connection with one's true and higher self; the connection with society and especially with the poor, the deprived and underprivileged; the connection with the world of nature and other life forms; and for some, a connectedness with the transcendent (National Health Service Scotland, 2009). Spiritual reminiscence was also considered an element of spiritual care and an important component of seeking meaning in later life and in navigating the latter stages of life's journey (MacKinlay & Trevitt, 2010).

There haven't been many studies that have compared altruism, life satisfaction, spirituality and subjective happiness in the old aged population between those living in families and old age homes. The authors found only one Indian study by Dubey, *et al.*, (2011) on elderly women at Jammu that researched on a sample of older adults in the families and old age homes. They reported that elderly women living in families were found to be more satisfied in their lives than the elderly people in old age homes. In contrast to that, few other studies indicated that having few social contacts or living alone does not itself indicate loneliness. In fact some older adults are happier with the people living outside their families and get more perceived support from them (Mullins, *et al.*, 1987). Also, it has been seen that older people prefer to be friendly with the people of their own age cohort. Those who have more intellectual, physical and material resources are found to have more social capital (Posner, 1995).

In view of the above researches, this study was planned to see the altruistic behavior in older adults and how it contributes to satisfaction with life and subjective happiness in older adults. Also, we attempted to study the differences on these personal traits between the older adults dwelling in old age homes and those living with their families. It was hypothesized that there will be a positive correlation between altruism, satisfaction with life, subjective happiness and more specifically, spirituality. Since, the old age homes elderly are living without their families and may be prone to loneliness; hence we hypothesized that the people living with families would be more altruistic, satisfied and spiritual. There is a dearth of studies in this area and it is of utmost importance for the geriatric population to understand

the relations between altruism, spirituality, life satisfaction and subjective happiness.

Methodology

A sample of 60 geriatric individuals with 60 years or above was studied of which 30 were living with families and old age homes each from the age range of 60 years to 83 years. The data was collected from two old age homes in Gandhinagar and Ahmedabad and older adults from families living in Gandhinagar, Ahmedabad and Bharuch, in Gujarat, India. There have been 19 males and 11 females, with the mean age of 74 years within the family group and 13 males and 17 females with the mean age of 76 years in the old age home group.

The measures used were, Altruistic Personality Scale (Rushton, *et al.*, 1981), Satisfaction with Life Scale (Diener, *et al*., 1985), Subjective Happiness Scale (Lyubomirsky and Lepper, 1999) and Spirituality Scale (Delaney, 2003).

The sample size was small and the socio-demographic data was skewed hence, we used spearman correlation between the different scales to see the relationship of altruism with life satisfaction and spirituality and subjective happiness. Also, for the same reasons, Mann Whitney was used to compare the two groups.

Results

The results indicated that altruism ($r=0.08$, $p=0.01$) was positively related to spirituality ($r=0.42$, $p=0.001$) and life satisfaction for the family group. None of the correlations were found to be significant for the old age home group. The spirituality ($r=0.55$, $p=0.001$) was positively correlated with life satisfaction for the older adults living in the families but the same was not true for the old age home group.

Also, the spirituality ($U=0.000$, $p=0.001$) and subjective happiness ($U=206.5$, $p=0.001$) was significantly better in old age home group than the older adults living with their families. The other domains were not significantly different in the two groups but altruism was found to be better in elderly living with families. Life satisfaction was better in elderly living in old age homes.

Table 1
Correlations

Altruism	*Spirituality*	*Life Satisfaction*	*Subjective Happiness*
Family	0.18***	0.42**	–0.25
Old Age	0.04	–0.07	0.15

** (p = 0.01)

*** (p = 0.001)

Table 2
Correlations:

Spirituality	*Life Satisfaction*	*Subjective Happiness*
Family	0.55***	0.10
Old Age Home	–0.06	0.21

*** (p = 0.001)

Table 3
Correlations

Life Satisfaction	*Subjective Happiness*
Family	0.07
Old Age Home	0.33

*** (p = 0.001)

Table 4
Mann Whitney (U)

Variables	*Condition*	*Mean Rank*	*Mann Whitney (U)*
Altruism	Family	32.65	385.5
	Old Age Homes	28.35	
Life Satisfaction	Family	28.58	395.5
	Old Age Homes	32.42	
Spirituality	Family	15.50	0.000***
	Old Age Homes	45.50	
Subjective Happiness	Family	34.10	206.5***
	Old Age Homes	26.90	

Discussion

As stated above altruism ($r=0.08$, $p=0.01$) was positively related to spirituality ($r=0.42$, $p=0.001$) and life satisfaction for the family group. It has been noticed that prosocial behaviors have been salient feature among the elderly (Midlarsky & Kahana, 2007) and older persons provide care to family members facing major illness (Fingerman, *et al.*, 2012). They also take care of their grandchildren when other adults are not available at home for some reason (Hayslip & Kaminsky, 2005; Kropf & Yoon, 2006). The reason that altruism is more in the older adults living with families may be due to the fact that the elderly in the family get more opportunities to support the family members, whereby in old age homes, they were not having such responsibilities. Also, it has also been noticed that people who are more resourceful socially, physically, psychologically and financially are more engaged in prosocial or helping behaviours (Thoits & Hewitt, 2001). As, it is evident, that the elderly living with their families are apparently more resourceful and could be more engaged in prosocial activities.

Spirituality ($r=0.55$, $p=0.001$) was positively correlated with life satisfaction for the older adults living in the families but the same was not true for the old age home group. The reasons may be manifold. One important aspect that may be noted here that the fact is the older adults living with their families may get more opportunity to exhibit their support to the family, neighbors and acquaintances and that may lead them to their satisfaction. Spirituality may lead to better satisfaction in their lives. Spirituality is found to be related with the longevity of their lives in the elderly population (Vaupel and Kistowski, 2005), probably because of this satisfaction and contentment in their lives. Spirituality is also found to be related to subjective well-being and good mental and physical health (Koenig, *et al.,* 2001). Also, it has been related, to a sense of self-regulation and self-control (McCullough & Willoughby, 2009).

Spirituality ($U=0.000$, $p=0.001$) and subjective happiness ($U=206.5$, $p=0.001$) were significantly better in old age home group than the older adults living with their families which may be leading to life satisfaction. On the contrary, Dubey, *et al.,* (2011) in a study on elderly women at Jammu, in the families and old age homes, reported

that elderly women living in families were found to be more satisfied in their lives than the elderly people in old age homes. The findings of the current study may be attributed mainly to the fact that there must be good social support of the like-minded people across the same age group within the old age home. Since, they are away from home they might have accepted the fact of life. They might have become more spiritual through their acceptance of the events in their lives. Also, with the same age group of people they might not feel lonely and would have been more involved in leisure time activities and hobbies that have given more happiness and satisfaction to them.

In support of these findings some other researches indicated that having few social contacts or living alone does not itself indicate loneliness. It has been reported that some older adults are happier with the people living outside their families and get more perceived support from them (Mullins, Johnson, & Anderson, 1987). Also, it has been seen that older people prefer to be friendly with the people of their own age cohort. Those who have more intellectual, physical and material resources are found to have more social capital (Posner, 1995). And these may be the reasons why older adults dwelling in old age homes had higher level of spirituality and were subjectively happier.

It could be concluded from the present research that altruism ($p=0.01$) and spirituality ($p=0.001$) were positively related to life satisfaction for the family group. Also, the spirituality ($p=0.001$) and subjective happiness ($p=0.001$) was significantly better in old age home group.

The limitations of the study were that the sample was small, it was a purposive sample and it could not be generalized on a larger group. In future, the study may be planned on a larger group with randomized sampling or with a matched controlled group. The study could be applied in several aspects. The findings from the study could be implicated to use certain counselling methods, psychotherapy, mindfulness and meditation to enhance their spirituality, thereby contributing to their happiness.

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Indian Journal of Gerontology
2017, Vol. 31, No. 3, pp. 272–288

Trials and Tribulations of Aged Women in Assam

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ABSTRACT

The study is exploratory in nature where primary data was collected by conducting a field survey of 200 aged women respondents from Guwahati city and rural parts of Kamrup District. The respondents were selected on a non random basis by using snow ball method of sampling and data was collected with the help of a 'pre-tested designed questionnaire. During the course of the study, it was found that the female respondents in their young and active days were generally engrossed with their household chores, upbringing of the children and taking care of the other members of the family. As such they were found not to have indulged in some preparatory measures to secure for their imminent old age. Moreover the lack of education and awareness about the available and suitable options were also found to render most of the aged women with no or sparse preparation for the times ahead when there was a sudden dip in the income levels at the expiry of their active working life.

Key words: Aged women, Widowhood, Health and ageing, Food habit, Leisure, Life preparatory measures.

An ever pervasive phenomenon that has been witnessed across the cross spectrum of society cutting across social, geographical and cultural barriers is the apathy that is being faced by the elderly segment

of the population and more so by the female segment. In order to analyze the trials and tribulations being faced by aged women, it is pertinent to focus on the key aspects of the survival and sustenance which are health, nutrition and income support. Moreover the life preparatory measures undertaken at the appropriate age also has a direct bearing on the status of the elderly.

Adequate income support at older ages is vital to maintain some degree of independence for aged women. Absence of sufficient income forces the elderly women to become dependent on others. The most vulnerable are those who have no productive assets, little or no savings or investments, no pensions or retirement funds. Women generally have limited control of house-hold resources. Women constitute a small proportion of the labour force in the organized sector and therefore, only limited numbers have the benefit of independent pensions. While some may benefit from a husband's pension on his retirement or after his death, others lose their entitlement once their spouse is deceased. Women who are unmarried, widowed or divorced are even more disadvantaged because of their longer expectation of life and period of widowhood.

Health and Ageing

The World Health Organization (WHO) defines health as a state of complete physical, mental, and social well-being. The bio-social and psychological problems of the aged are observed at three levels: individual, family, and society levels. At the individual level, the problems that affect the aged are physical disability, declining resistance to combat diseases, undernourishment, and physical and psychological alienation. At the family level, the aged may be affected by weakening of family ties, decreased coping mechanism, burden of unfinished family responsibilities, changes in value-system, generation-gap, changes in family structure, declining financial condition of the family, dependency on pension, etc. Similarly, at the societal level industrialization, urbanization, increasing individualism, modernization, technological advances, migration, gender-based discrimination, inadequate medical facilities, creates diverse health problems among the aged. Further, it is essential to consider the health of ageing women from a life course perspective because the health of

women in earlier periods of her life forms the basis of her health in later stages. Research reveals a complex set of factors which are involved in determining the heath status of the aged (Bagga, 1998; Bonita 1998; Himabindu, 2002; Chakraborti, 2004; Devi and Bagga, 2006; Chatterjee, 2008). The four most important factors, which affect and determine the health status of the aged, are as follows:

- Hard work combined with poor nutrition leads to the state of general disability and most of the aged suffer from what maybe called 'deficiency' illness.
- Hazardous environmental conditions, such as poor sanitation, polluted water, improper drainage system.
- Inadequate and unbalanced diet and
- Availability and the quality of health services

Gaymu, *et al.,* (2006) in their study on determinants of the living arrangements in Europe studied the health definitions of older people in different countries including France, Germany and UK. In the United Kingdom two different health-related variables were studied to understand the health of aged people. The first is self-reported health status, the second is self-assessment of whether or not a person has a long-term illness, health problem or disability that limits their daily activities or the work they can do, including problems that are due to old age. Similar variables were studied to understand the health status of the urban and rural aged women respondents.

The purpose of this exploratory study was to find out the health status and various types of ailments in rural and urban elderly women. The present study also through light on the various kinds of sufferings of the elderly women of this sample.

Method

Sample

200 elderly women (80 from rural area of Kamrup district and 120 from urban area-Guwahati city) age varying from 60 years and above were selected randomly for this study.

Tool Used

An interview schedule consisting questions related to general health, ailments, activities of daily living, food habits and nutrition, leisure time activities, awareness of support system and relationships with family members, etc. were prepared. The subjects were interviewed individually.

Appropriate statistical tests were used in the analysis of data.

Findings and Discussion

Following Gaymu and others (Ibid) analysis the present study used the variable self reported health status by asking the respondents perceptions about their health in general (healthy/unhealthy).

Table 1
Self Reported Health Status of the Respondents

Self Reported Health Status	*Rural*		*Urban*	
	No. of Respondents	*Percentag*	*No. of Respondents*	*Percentage*
Health	50	62.50	83	69.17
Unhealthy	30	37.50	37	30.83
Total	80	100.00	120	100.00

Out of the 120 urban respondents 69.17 per cent stated that they were healthy and 30.83 per cent respondents stated that they were unhealthy (Table 1). However many of the respondents who rated themselves as healthy were suffering from some kind of health problem. They were positive in their response and considered their ailment as minor when compared to other people of their age.

A long-term illness, health problem or disability limits daily activities which are hampered due to old age. This variable was studied by enquiring whether the respondents required assistance in their activities in daily living or not?

Table 2
Health Status and Activities is Daily Living (Urban)

Difficulty/No difficulty	*Healthy*	*Unhealthy*	*Total*	*Percentage*
Difficulty in ADL	1	10	11	9.17
No difficulty in ADL	82	27	109	90.83
Total	83	37	120	100.00

Of the 83 urban respondents who stated that they were healthy, only 1 respondent had difficulty in performing activities in daily living. Of the 37 respondents who rated themselves as unhealthy, ten respondents had difficulty in performing their activities in daily living and needed help (Table 2). With declining health status the difficulty in performing activities of daily living increased in the urban areas.

Table 3
Health Status and Activities in Daily Living (Rural)

Difficulty/No Difficulty	*Healthy*	*Unhealthy*	*Total*	*Percentage*
Difficulty in ADL	1	9	10	12.50
No difficulty in ADL	49	21	70	87.50
Total Respondents	50	30	80	100.00

Of the 50 rural respondents who rated themselves as healthy, only 1 respondent had difficulty in performing activities in daily living. Of the 30 rural respondents who rated themselves as unhealthy, 9 respondents had difficulty in performing their activities of daily living (Table 3). The finding reveals that with declining health the difficulty in performing activities of daily living increased in rural respondents.

Another important feature that cannot be ignored is the nature of problem or the type of disease the elderly women respondents (both from urban and rural areas) suffered. A gradual decline in functioning of the various organs of the body surfaces as one advances in age and manifests itself in the form of various diseases. The elderly suffer not only from ailments specific to ageing, but also from ill-health accumulated over the life cycle which may manifest in old age in an aggravated

form (Bagga, 1999). Many respondents were found suffering from multiple diseases.

Table 4
Type of Ailments from which Respondents Were Suffering

Type of Disease	*Rural*		*Urban*	
	No. of Respondents	*Percentage*	*Respondents*	*Percentage*
Asthma	2	3.33	2	2.25
Back pain/Neck pain	2	3.33	2	1.12
Cancer	1	1.67	1	1.12
Cervical Spondylities	0	–	3	3.37
Cholesterol	1	1.67	2	2.25
Depression	1	1.67	4	4.49
Diabetes	2	3.33	8	8.99
Digestive disorders	2	3.33	0	–
Eye ailments	8	13.3	3	3.37
Filaria	1	1.67	0	–
Hearing impairments	3	5.00	1	1.12
Obesity	1	1.67	2	2.25
Osteoporosis	2	3.33	3	3.37
Other gerontological problems (weakness, body pain etc.)	8	13.33	11	12.36
Respiratory problem	2	3.33	1	1.12
Skin disease	1	1.67	1	1.12
Swollenlegs	3	5.00	2	2.25
Thvroid	1	1.67	5	5.62
Urinary incontinence	2	3.33	1	1.12
Total	60	100.00	89	100.00

The most prominent problem that was found to be affecting the respondents is high/low blood pressure. 14.61 per cent of the urban and 13.33 per cent of the rural respondents, who were suffering from diseases, were found to be having this problem. Problems of the joints, arthritis, rheumatism, etc. also appear to be common mainly in urban areas. Prevalence of diseases like heart disease, diabetes appears to be the major problem of the elderly with 11.24 per cent of the urban

respondents found suffering from heart disease and 8.99 per cent suffering from diabetes. Chakraborti (2004) also mentioned the increase in lifestyle diseases like heart diseases, diabetes, high blood pressure more in urban areas of India, than in rural areas. Disability of sight and hearing deficiencies has been reported to be more prominent in the rural areas where 13.3 per cent of the respondents were suffering from eye problem and 5 per cent from hearing impairment. Around 13.33 per cent of the rural and 12.36 per cent of the urban respondents were found to be suffering from other gerontological diseases including weakness, body pain. Among the late age mental disorders, depression was found to be quite common with 4.49 per cent of the urban elderly and 1.67 per cent of the rural elderly found suffering from depression. No case of dementia was found (Table 4).

However, many of the respondents were found suffering from multiple diseases. An analysis of the respondents suffering from multiple ailments was felt necessary to measure the level of sufferings of the respondents.

Table 5
Single/Multiple Ailments

Single/Multiple Ailments	*Rural*		*Urban*	
	No. of Respondents	*Percentage*	*Respondents*	*Percentage*
Single Ailment	22	27.50	31	25.93
Multiple Ailment	17	21.25	24	20.00
No Health Problem	41	51.25	65	54.17
Total	80	100.00	120	100.00

Of the 120 urban respondents 20 per cent of the urban respondents were found to be suffering from multiple ailments. One of the respondents stated that she was suffering from diabetes and spondylitis both. In one case the same respondent was found suffering from diabetes, thyroid and had undergone a heart surgery. Many of the respondents were found to be having problem of blood pressure and thyroid. In the rural area also 21.25 per cent of the respondents were found having multiple ailments (Table 5).

Most of the diseases suffered by the elderly were chronic in nature, which essentially called for good care and regular support from the family. However, with the breakdown of the extended families and with increasing participation of women care givers in activities outside the home, the caring and nursing of elderly at home might has become problematic.

The health facilities were found to be better with Guwahati city having a comparatively good number of hospitals vis-à-vis the rural areas. Many of the rural respondents felt that there sufferings were more because it was difficult to diagnose the disease in rural areas. Notably there were no geriatric departments in the medical colleges and geriatric wards in the district hospital as pointed out by the respondents. No provision for medical benefit to the elderly citizen existed in the study area by way of providing concessions in terms of purchase of medicines and/or physical examinations in pathological laboratories, etc. unlike developed countries. The governments in developed countries like Australia and Japan have been trying to separate long term-care from acute care through the establishment of geriatric and care-type hospitals and health care facilities for the aged (Anon, 2000).

Food Habits and Nutrition

Inadequate intake of calories, vitamins and minerals and improper food habits and nutritional intake in earlier periods of a women's life has a subsequent impact on her health in later stages. For example, the risk of osteoporosis or bone loss increases in women after the menopausal years, with insufficient calcium intake being a major constituting factor. Further, the differences in food habits, consumption levels and nutritional quality are based not only on socio-economic status, but are also determined by the cultural habits of the people. In a study conducted by Devi and Bagga (2006) on Meetei women of Assam and Manipur a difference in the number of meals per day and the nutritional content of the food was studied to better understand the health status. The number of meals differs with aged Meetei women in Manipur consuming two meals a day and Meetei of Assam consuming three meals a day generally. Use of pulses is extremely low among Meetei of Manipur as compared to Assam.

Consumption of milk and fruits was particularly negligible in both the groups.

In order to have an overview of the food consumption patterns of the aged women respondents and the level of satisfaction about the quality and the nutritional contents of food was gathered.

Table 6
Food Consumption Pattern of the Respondents

Eating per day	*Rural*		*Urban*	
	No. of Respondents	*Percentage*	*No. of Respondents*	*Percentage*
2 times	11	13.75	18	15.00
2 to 3 times	28	35.00	39	32.0
3 times	10	12.50	43	35.83
3 to 4 times	31	38.75	20	16.67
Total	80	100.00	120	100.00

From a perusal of the findings, it was observed that a majority of the respondents were found consuming two to three meals a day and were satisfied with the quality and nutritional content of the food they consume (Table 6).

Leisure

In order to overcome mental worries and physical fatigue, every individual needs some leisure. It is often remarked that unsystematic and unorganized leisure will eat into the vitals of an individual's happiness. If leisure is not properly utilized, it may lead to a sense of boredom. The advent of the electronic media in the shape of radio, television, etc. has also been a handy tool of entertainment in the leisure time of the aged persons with the electronic media hosting programmes that target this section of the audience. Participation in social, household and religious activities is essential for the wellbeing of all ages. In the period gone by a very intriguing activity of aged woman used to be occasional cooking of delicacies or other meals for the children and grandchildren at home. However with increasing urban trend of eating out, the aged women were found to be deprived of this interesting chore.

Connecting with family members, neighbours, work colleagues and community group brings happiness to everyone. The importance of the same is enhanced manifold in the older ages since older people are more likely to have lost loved ones and friends and are therefore more vulnerable to loneliness, social isolation and the availability of a smaller social circle. The concept of joint family wherein a lot of family members used to reside under one roof was also a blessing for the elderly as they used to have constant company of some family member or the other and as such there was not much time left to be alone. However the advent of the nuclear or single family concept wherein the size of the household has decreased considerably has had negative impact on the elderly as there are only a few family members who are generally preoccupied with their own work and find very little time to spend with their elders.

In the present study, leisure time was considered as that spare time, free from economic activities, domestic chores and other related activities that is available to elderly women. The variable has been measured in relation to two factors

1. Involvement in social activities
2. Involvement in religious activities and visit to temples

Table 7
Involvement of Respondents in Social and Religious Activities

Nature of Activity	*Total Respondents*	*No. of Respondents Involved*	*Percentage of Involvement*
Rural Respondents			
Social	80	11	13.75
Religious	80	49	61.25
Urban Respondents			
Social	120	30	25.00
Religious	120	43	35.83

In the case of a sizeable number 61.25 per cent of the rural respondents, the major activity during their leisure time was to get involved in some form of religious and cultural activity at the local nearby *Namghar* or temple or at any such similar place. In urban areas participation in this activity was found to be comparatively less than the

rural areas with 35.83 per cent of the urban respondents participating in religious activity as against 61.25 per cent in the rural area (Table 7). The main reason for not participating was the factor of mobility. Many of the respondents in the urban area found it difficult to move out in the streets in the cities because of the bad conditions of the roads and the heavy concentration of traffic. Moreover no convenient and affordable means of communication were available for the elderly to visit and participate in religious activity. They were highly dependent on their family members for this support which was generally not available due to their preoccupations and indifferent attitude.

Participation in social activity was found to be less in rural area where only 13.73 per cent of the rural respondents were found involved in social activities. This is mainly on account of lack of organized social activities and the traditional practice of women not venturing out of the house unless it is very necessary to do so. The proportion was higher in urban area where 25 per cent of the respondents were involved in social activities. Due to the change in the living culture of urban areas the elderly females also find is comfortable to venture out of the house and the avenues of organized social work is more prevalent in the urban area. Some of the respondents were found to be more active on account of their association with some community groups, social clubs working for community development, cleanliness drives, charity, etc.

Life Preparatory Measures

Adequate measures taken at the right period of life when one is in active working stage is pertinent to shield oneself from the tribulations and adversities of life at old age of any individual and more so in the case of women. The concept of preparation for old age is not prevalent in India, as they assume that it is the children's responsibility to look after the elderly in their later days. (Rajan, *et al.,* 1999). The preparation required are mainly in terms of finance as well as health to tide over the old age when a person is facing paucity of the first and poverty of the second.

During the course of the study, it was found that the female respondents in their young and active days were generally engrossed with their household chores, upbringing of the children and taking

care of the other members of the family. As such they were found not to have indulged in some preparatory measures to secure for their imminent old age. Moreover the lack of education and awareness about the available and suitable options were also found to render most of the aged women with no or sparse preparation for the times ahead when there was a sudden dip in the income levels at the expiry of their active working life. Only very few of the respondents were found to have made some investment in property such as land, house, gold, jewellery apart from limited monetary resources. In many of the cases where the respondents had made some savings for their old age, it was also found that ironically the savings/property was already relinquished to some family member thereby rendering the elderly with no support to fall back in the old age. As a direct fallout of this unpreparedness, the aged women were found to be very vulnerable and dependent on their family members for their day to day needs as well as medical requirements and other emergency support. This vulnerability was found more in the case of the old-old and widowed women who after the demise of their spouses were rendered further dependent on their other family members. It was also observed during the survey that a large number of the respondents mainly from the rural area were in general hesitant to divulge the details of their savings, land and property.

Awareness about Support Schemes

In any developed society the State should undertake suitable measures to alleviate the sufferings of the elderly by way of formulation of policies to ensure their economic and health security. Though progress has been made in the health care sector in India, the improvements have been largely uneven with the major activity concentrated on the urban areas. Much of the emphasis of health care delivery system was on mother and child programmes with special emphasis on controlling population. Older people were largely excluded (Prakash, 1999).

In the district of Kamrup as well as the state of Assam, the Senior Citizens' Association has been long pressing for the implementation of various policy measures for the elderly such as opening of geriatric

departments in the medical collages and geriatric wards in the district and other hospitals of the state, providing concessions in the purchase of medicines and physical examinations in pathological laboratories, an increase in the quantum of the monthly pension of the senior citizens along with other welfare measures to provide amenities to the elderly section of the society. These measures could benefit more than five lakh elderly citizens of the state (Anon, 2011).

During the course of the survey, a majority of the respondents were found to possess a total lack of awareness about the availability of any support scheme framed for the welfare of the aged women. The lack of education of the respondents and the lack of awareness creating campaigns on part of the policy makers and administrators were found to be the primary reason for the same. In cases where there was some information available, the means were found to be complex making it difficult for the beneficiary to access the support. Only in very few cases, some respondents were found to be availing some medical facilities and travelling concessions such as railway concessions in the urban areas. It is worthwhile to mention that the support schemes which are being made available by the Governments are so paltry and inadequate that the respondents were found not to have any motivation or inclination in availing the same.

Table 8

Awareness Level of Respondents Regarding Various Government Schemes

Awareness on	*Rural*		*Urban*	
	No. of Respondents Aware	*Percentage of Awareness*	*No. of Respondents Aware*	*Percentage of Awareness*
Old-age pension	68	85.00	60	50.00
Railway Concessions	44	55.00	86	71.67
Old-age homes	22	27.50	61	50.83
Services by voluntary organisations	11	13.75	21	17.50

Source: Field survey

Table 8 shows that 85 per cent the respondents from the rural area were aware about old age pensions as compared to only 50 per cent in the urban area. However in the urban area a large number of the respondents were receiving family pension/retirement benefit from the department where they or their spouse were employed or were otherwise not eligible for the National old age pension scheme. 55 per cent of the respondents from the rural and 71.67 per cent from the urban area were found aware of the railway fare concession. The urban respondents were found to be more aware of old age homes at 50.83 per cent as compared to the rural areas where only 27.50 per cent respondents were aware of the same. However a very negligible per centage of the respondents from both urban as well as rural areas were aware of any services by voluntary organizations such as NGOs, trusts, etc. This was found to be the case inspite of the presence of such a large number of organisations, but very few being involved directly in offering any services for the elderly

Involvement in Domestic Issues

The say of a person in the day to day activities of the house is a very pertinent facet of the status that the person commanded in the house. It is generally seen that with the passage of time, the involvement of the elderly persons in the decision making process of the family is gradually reduced. This is fallout of the rapidly changing scenario as well as the decline in the financial power of the elderly. Moreover with an advancement in age, there is also gradual erosion of the mental faculty which results in deterioration of memory and mental sharpness thereby impacting the decision making process. However in traditional matters such as religious ceremonies, social events, etc. the elderly are called for as they posses experience in the same and are considered to be wise.

During the course of the study, the respondents were asked some questions about the level of involvement in the family affairs and the other matters of the family. The response has been tabulated as shown below:

Table 9
Respondents' Participation in Decision-making Activity

Participation of respondents in decision making in various matters	*No. of Respondents Participated out of 80 Respondents*	*Percentage of Participation*	*No. of Respondents Participated Out of 120 Respondents*	*Percentage of Participation*
Rituals and ceremonies in the family	66	82.50	89	74.17
Financial matters in the family	54	67.50	68	56.67
Day-to-day running of the family	60	75.00	75	62.50
Marriage in the family	66	82.50	84	70.00

Of the above mentioned activities of rituals and ceremonies of the family, financial matters, day to day running and marriage in the family, in the rural area it was found that 82.50 per cent were involved in rituals and ceremonies and marriage in the family and 67.50 per cent were involved in financial matters and 75 per cent were involved in the day to running of the family in the rural area. In the urban area, 74.17 per cent were involved in rituals and ceremonies, 56.67 per cent were involved in financial matters, 62.50 per cent were involved in the day to running of the family and 70 per cent were involved in marriage in the family (Table 9). As such in the context of the participation of the elderly in the family matters, it was found that they were actively associated in such activity.

Table 10
Level of Participation of Respondents in Decision-making Activity

Participation of respondents in decision making (out of 4 activities discussed above)*	*Rural*		*Urban*	
	No. of Respondents Participated	*Percentage of Participation*	*No. of Respondents Participated*	*Percentage of Participation*
All the 4 activities	32	40.00	41	34.17
3 out of the 4 activities	28	35.00	28	23.33
2 out of the 4 activities	15	18.75	30	25.0

Cont'd...

Cont'd...

1 out of the 4 activities	4	5.00	8	6.67
None of the 4 activities	1	1.25	13	10.83
Total	80	100.00	120	100.00

* the activities include:

(i) Participation in rituals and ceremonies of the family,

(ii) Participation in financial matters of the family,

(iii) Participation in day to day running of the family,

(iv) Participation in marriage in the family.

From Table 10, it is observed that the respondents from the rural area are more actively involved in the family matters and rituals of the family as compared to the urban respondents. Of the four activities analysed viz. rituals and ceremonies of the family, financial matters, day to day running and marriage in the family, 40 per cent of the rural respondents were involved in all the activities, whereas 35 per cent were found involved in three out of the four activities. Of the urban respondents, 34.17 per cent were involved in all the said activities whereas 23.33 per cent were involved in three of the four activities. From the above, it can be interpreted that inspite of old age, frail health and mental status, the elderly still try to contribute by being involved in any manner possible in the affairs of the family. The fact that they have been totally involved in the running of the house and making the decision for the members for such and long period of time impels them to continue as contributors to the family cause inspite of the fact that they are now old and the reigns of the household has passed onto the next generation.

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Indian Journal of Gerontology
2017, Vol. 31, No. 3, pp. 289–305

Perception of University Students Towards Old Age Persons

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ABSTRACT

The paper examines the attitude of youngster towards elderly persons. 80 P.G. students of both the sexes (F=57and M=23) age varying 21–26, having grandparents in their families were selected by purposive sampling. The respondents were individually administered questionnaire having open and close ended questions related to attitude and perception towards elderly. The findings of the study revealed that most of the respondents were aware of the difficulties faced by elderly in their old age. Due to the changed pattern of family and living styles, elderly have become the point of neglect. Now economic factor plays great role in family's interpersonal relations. Elderly are considered none more than an extended member of a family. Fulfilling the needs materially is only criteria of taking care of old person. In the present context the emotional connection with elderly in the family have become totally lost.

Key words: Elderly; Traditional; Attitude; Youngster; Modernization

Ageing is a profound source of suffering in this youth-oriented culture (Ram D., 2001). The age which should be a dignified living is forced, often naturally and sometimes intentionally to accept the fact of being "old". Ram Dass (Ibid), says that "All my life I had been a "helper". I now found myself forced to accept the help of others and to admit that my body needed attention".

As a matter of fact, ageing is an unavoidable phase and is a coalition of various problems. It is compounded when the elderly lacks in physical and mental support by their own family members. Since ageing demands for extra care and attention due to loss of sensory system and weakening of physical strength, elderly, by all means, have to rely on the help and support of family members (Kumar & Bhargawa A., 2014). The older generation is caught between the decline in traditional values on one hand and the absence of an adequate social security system on the other; thus they find it difficult to adjust in the family (Gormal, 2003). Urbanization has led to a busy schedule rendering elderly people neglected. Old age means reduced physical ability, declining mental ability, the gradual giving up of role playing in socio-economic activities and a shift in economic status moving from economic independence to economic dependence upon others for support. Old age is called "Dark" not because the light fails to shine but because people refuse to see it (Gowri, 2003).

The changing traditional value system and the structure of family has led to declining understanding and 'love and care' for fellow beings. In the Talcott Parson's concept of 'social system', cultural system talks about the role of family, that confirms the pattern maintenance and tension management. But since the society is going through disintegration of joint family system, man's 'self' has become powerful. Even the extended member of a family like sister-in-law, brother-in-law are shown to be extra burden on a family and in such an environment, old age being the age of total dependency, in one way or the other, is considered total burden by the family members.

The strength of grandparent-grandchildren relationship varies based on the relationship between the parents and grandparents (Monserud, 2010). Parents' empathy towards their parents helps in learning the emotive essence of relationships by children. Grandparents make a difference in families and their influence is long term.

Level of contact and exposure to older people is considered a factor which may influence youngsters' perception of older people. Interaction with older people may occur in a personal domain, or in an educational or professional context and with different levels of contact in terms of both frequency and intimacy. Some researcher have found that perception of ageing reflect the frequency of contact with older

individuals (Kimuna, *et al*., 2005). Grandparents used to be the most popular and reliable source of "socialization", as they were the best to inculcate moral values and manners into the child because of their own life experiences. But now, lack of time and increased generation-gap has loosened the link between young and old. Loneliness, poor health, depression are some of the miseries that modernization has given to our society. 'Old age' now means the life of 'dependency'. Early adolescents who had positive emotional relationship with the grandparents tended to reflect more pro-social behavior towards family, friends and strangers, as well as a significant growth in pro-social behavior towards strangers overtime (Yorgason *et al*., 2011).

The Indian Ashram Vyawastha *(system)* has two later stages, which are *Vamprastha* Ashram and *Sanyasa-Ashram*. These stages of life are significant due to their pursuance of "purity of soul". It was considered that the four stages of Ashram *Vyawashta* were the medium to achieve *"Moksha"*. Scientifically speaking the concept of Moksha is not an otherworldly imagination, it is just an idea of peaceful death (which every old person aspires) or a state which is free from any stress and burden. *Vamaprastha* Ashram usually starts at the age of 50, in which the person leaves his home and he takes retirement from the materialistic life and all social relationships. He now lives for social welfare only and works selflessly for human concerns.. The age of 75 is the time when he enters the final Ashrams i.e. Sanyasa Ashram, where he used to be free from any thought of life and death. Elderly's only concern is to realize liberation. Thus, he leads the remaining life meditating and spreading his knowledge and personal experiences of life. His teaching being useful to others is a great lesson of life. Sanyasi was regarded to be a great respectable person in the society. With the advent of modernity, the structure of family has changed and the Ashram Vyavastha has lost its essence. The last stages of the Ashram vavastha has been replaced by the "Vridha-Ashram vyavastha (Old age homes).

A theory of modernization has been proposed which suggests that a relationship exists between ageing and modernization, where older men and women in less technologically advanced societies tend to yield more economic and social power than those in more industrialized countries. Inspite of the traditionally collectivist nature of some

cultures, changes associated with all modern societies have led to the growth of individualism, which is now one of the characteristics of our civilization (Cowgill, 1986). Modern parents are now earning for their children till the age of 62–65 years instead of going for *Vanaprastha Ashrama*. Increasing competition is pushing *Brahamascharya Ashrama* age more forward day by day and this condition further pushes the parent's *Grihastha Ashrama* age. New institutions and life style have given a new structure to family. The ashrama vyavastha is no more a boundation. Modern era, *Grihastha Ashrama* starts after retirement of a person and he becomes more indulged in familial relationships. Today's busy life where a person doesn't have enough time to give his family is one of the reasons for this after age indulgence. Till the time parents retire, their children usually have entered the working age and so do not get enough time to spend with their parents. The modernization has injected the race of being updated into the minds of people, which has geared the spirit of competition so much that one can experience Darwin's "Survival of the fittest" rule live.

As people live longer and the ageing population grows worldwide, it becomes increasingly important to identify prevailing attitude towards older people in society. Ageist attitudes may lead to discrimination and mistreatment of older people (Mc Conatha *et al.*, 2004). Public perception and stereotyping of older people play an important role in ageist behavior and age discrimination (Hagestad & Uhlenberg, 2005). Ageist images of the elderly such as senile, sedentary, sexless and spent force are generally taken for granted as facts. Sharma (2009) conducted a study on 600 college students and found that these respondents expressed various kinds of stereotypes about elderly persons, such as: not having enough money to live, poor health, loneliness, lack of proper housing, not have work to keep busy and fear of criminal attack etc. The views of respondents having or not having elderly in the family differed widely. It was also revealed in the study that the treatment elderly receive in the families varies from extreme reverence and respect to deprivation.

Stereotyping provides information that guides out interaction with others helping us to quickly know what to expect and often

leading us to behave in ways that confirms the stereotypes (ladtika *et al.,* 2004). For example, someone may speak more loudly to an older person based on frequent stereotyping of older persons as having hearing problems (Steele *et al*., 2007). Many people are unaware of their discrimination against older people (Lee, 2009). According to a report of European commission 2008, the discrimination on the grounds of age is the most commonly experienced form of discrimination. Earlier, children provided care and support for their aged parents as a means of repaying the tremendous debt, owed to their parents for producing and caring for them in infancy and childhood (Lamb, 2004:46). The object of the present study was to find out the perception and attitude of younger people towards their grand-parents/old people within family or outside.

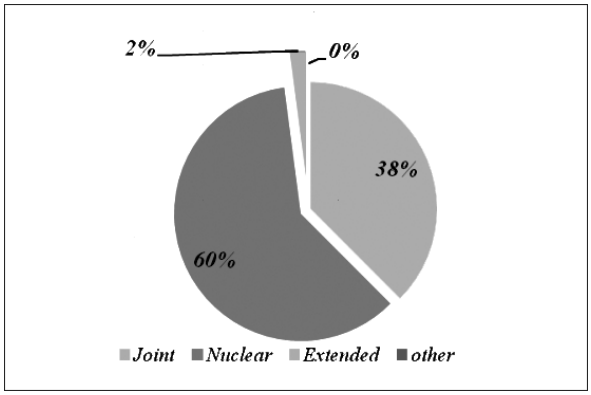
Material and Methods

Total sample size of 80 respondents were selected for the present study where 57 (71%) were female respondents and rest 23(29%) were male respondents. All the respondents were selected by the purposive sampling method according to availability of grandparents in their family from Post Graduate level of students of university. This comprised of 44 per cent respondents (35 respondents both male & female) from MSW, 28 per cent (22 respondents- both male & female) from MA Sociology, 16 per cent (13 respondents both male & female) from MA political science and 12 per cent (10 respondents both male & female) from MA Psychology. Students who were selected for the study were of the 21 to 26 years.. All these respondents had grandparents (some of them were retired persons) in their family. All these respondents were administered a questionnaire individually in the University (H.N.B. Garhwal University) campus. The main tool used for data collection was a questionnaire which contained both open and close ended questions seeking background information of respondents, their attitude and perceptions towards elderly persons and mutual interaction of grand parents and grand children. Qualitative information was also gathered from the respondents. Descriptive research design was used in the study. Appropriate statistical tests were used in the analysis of data,

Result and Discussion

Background Information of Respondents

Figure 1
Family Structure of Respondents



The above figure shows the family structure of respondents. 38 per cent of PG level students (respondents) agreed that their family structure is still joint and all family members live together. It was very much visible that due to impact of modernization, structure of joint families is gradually shifting to nuclear. Highest percentage of respondents (60%) admitted that their family structure is nuclear and each one of their uncles have separate residence and living with their wives and children. This shows that Socio-economic changes might have brought a significant impact on family structure and they are leading to the breakdown of the joint family structure which was primary support for elderly in our traditional system.

Table 1
Total Family Size

Size	*Frequency*	*Percentage*
Small (2-4)	19	23.75%
Medium (4-7)	48	60.00%
Large (7 to above)	13	16.25%
Total	80	100.00%

On the basis of family structure of respondents, researchers tried to find out their family size including their old parents. Due to high living cost and more expenditure of daily life most of the people want to get separated from the joint family and want to manage a small or bearable family structure. As per above family size data shows that highest percentage (60%) of respondent's family size is medium, where not more than seven family members live in a family. Moreover, their grandparents visit them but for short period of time only. Only 16.25 per cent respondents agree that their family structure is large where more than seven family members live together and their grandparents always reside with them.

Command of Family Regarding Various Aspects

Table 2
Head of the Family

Head	*Frequency*	*Percentage*
Grand-father	11	13.75%
Grand-mother	08	10.00%
Father	47	58.75%
Mother	14	17.50%
Total	80	100.00%

It is quiet surprising that family command has been shifted from our grandparents to our parents due to socio-economic changes and breakdown of family structure. 58.75 per cent of the respondents (PG level students) indicated that their father is the head of the family and all important decisions are taken with his permission. Due to erosion of authority and less decision-making capacity of old people, only 13.75 per cent of the respondents admit that their grandparents are the head of the family and all kind of decisions are taken with their consultation and suggestion within a family. While 17.50 per cent respondents indicate that their mother is head of the family because father is working outside but still she takes some important decisions with the help of their father.

Attitude and Perception of Youth Towards Old Age People

Table 3

Attitude of Youth Respondents Towards Old Age

S.No.	*Particular*	*Male (Frequency)*	*%*	*Female (Frequency)*	*%*	*Total*	*%*
1.	**Perception on old age**						
	1. Physically Weak	08	10.00	20	25.00	28	35.00
	2. Psychologically Weak	03	03.75	05	06.25	08	10.00
	3. Both	10	12.50	28	35.00	38	47.50
	4. Any Other	02	02.50	04	05.00	06	07.50
	Total	23	28.75	57	71.25	80	100
2.	**Satisfaction level of old people within family**						
	1. Better	12	15.00	31	38.75	43	53.75
	2. Quite Satisfied	06	07.50	11	13.75	17	21.25
	3. Not satisfied	04	05.00	10	12.50	14	17.50
	4. Bad	01	01.25	05	06.25	06	07.50
	Total	23	28.75	57	71.25	80	100

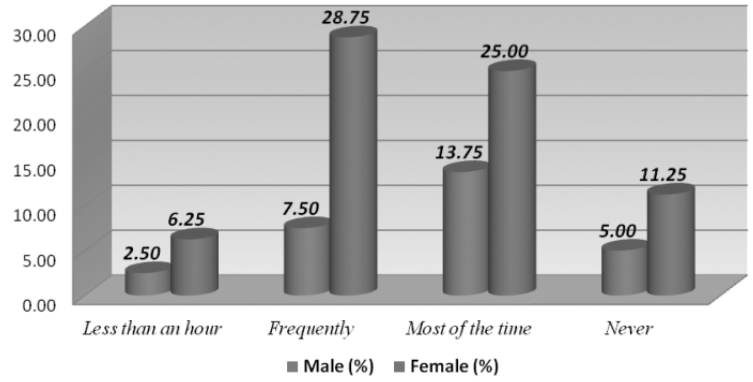
Above table is showing the perception of younger people and satisfaction level within family towards their grandparents or old people. Where, higher 47.50 per cent of respondents (*both male and female*) from all classes think that old people have both physical and psychological problems. 34.78 per cent of male (*out of total 23 male*) and 35.08 per cent of female respondents (*out of total 57 female*) agree that old aged people are generally physically weak because their body (*weak eyesight, Bone & joint pain, Dental & Digestive problem etc.*) do not support them. One of the female respondents says that "*In the old age stage people totally depend on others and due to this they become emotionally insecure. We should help them during this critical stage of life*". It is clear that most of the younger people are aware that old aged people face both physical and psychological stress.

On the question of satisfaction level of grandparents/old people within their family, highest percentage of respondents 53.75 per cent (both male and female from all classes) indicates that their grandparents are happy within their family and their satisfaction level is

better because their family always fulfills their daily (*medicinal*) needs. One of the respondents said that *"Whatever my grandparents expect from our family we always try to fulfill that"*. While 26.08 per cent of male respondents (out of total 23 male) and only 19.29 per cent of female respondents (out of total 57 female) accept that their grandparent's satisfaction level is quite satisfied within family because family always fulfills their basic and essential needs. One male respondent says that *"My family members always give respect to grandparents but sometimes I feel that they strongly stand on conservative thoughts, we feel that they should change their thinking according to present times"*. Sometimes the expectations of the old aged people are high with their family as compared to the family condition which sometimes leads to the unnecessary conflicts. One said that *"being from a middle class family sometimes my grandmother compares the status and life with the leisures of high class family, & she feels inferior in herself"*. Un-satisfied level of old aged people within their family is quite less because in rural or semi-rural areas people are still traditional and respect to old values but one of the respondents said that *"My grandparents' thinking totally differs from that of my parents, there is not any similarity of thinking between them and due to this grandparents remains un-satisfied"*.

Involvement of Younger with their Grandparents

Figure 2
Speding Time with Grand Parents



When we tried to know from the respondents about, how much time they spend with their grandparents, the most frequent response was given from the female respondents (40.35%) as compared to male respondents (26.08%) & they put their hectic and busy schedule of life as the common reason. They admit that they don't have enough time to spend with their grandparents because they get less time for study, for their friends and gaming activities, while very few (around 8.69% both male & female) students agree that he/she spends his/her time for less than an hour with their grandparents. 38.75 per cent of both male and female admit that they spend most of their time with their grandparents or any other old person and they get to know their life experiences and discuss different social, cultural and other issues. Only 16.25 per cent students indicate that they never spend their time with old/grandparents due to their irritating attitude and conservative thoughts.

Issues of Discussion with Grandparents by Younger

Table 4
Type of Discussion with Old People/Grand-parent

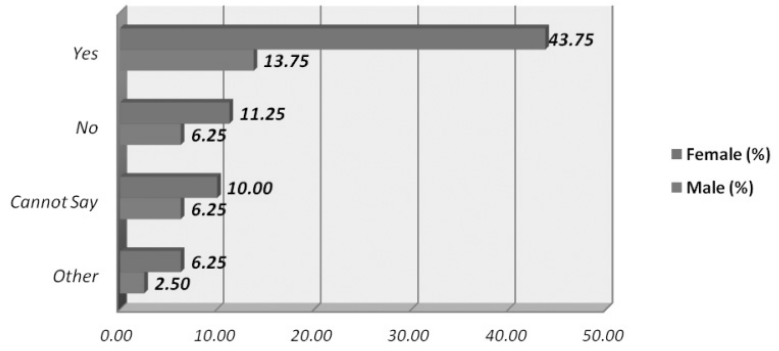
Particular	*Male (Frequency)*	*%*	*Female (Frequency)*	*%*	*Total*	*%*
Social Issues	13	16.25	19	23.75	32	40.00
Cultural Issues	04	05.00	21	26.25	25	31.25
Political Issues	03	03.75	06	07.50	09	11.25
Any Other	03	03.75	11	13.75	14	17.50
Total	23	28.75	57	71.25	80	100

Above table shows the type of discussion respondents preferred with the old aged/grandparents, wherein less than half (40.00%) of both gander accept that they always want to discuss social issues with their grandparents/old people. Wherein, family problems, societal problems, are the issues which are mostly focused by respondents. 31.25 per cent respondents (both male & female) responded that they always discuss different cultural issues and try to know the significance of old traditional culture as compared to the modern culture. One of the respondents said that *"I always discuss with my grandpa on cultural issues because he always gives preference to our cultural values and he loves*

to share his views on that". While another says that *"whenever we talk on cultural issues with our old people they remind us of our traditional & ritual values and compare it with modern culture"*. Old/grandparents are our source of traditional and ritual values but in the present context, younger people forget their traditional pattern due to detachment with them and now they live in virtual world. Our old knowledge gradually got segregated from new generation. One says that *"we can get the knowledge of other subjects from books but the knowledge of our culture can be obtained only from our grandparents/old people"*.

Caring Attention to Grandparents by their parents

Figure 3
Caring Attention to Your Grand-parents by Your Parents



On the question of proper attention to their grandparents by their parents, highest 43.75 per cent (*35 out of 57 female*) and 13.75 per cent (*11 out of 23 male*) respondents, responded that their parents always give proper attention to grandparents through proper and timely health check-up and medicine, by keeping in mind their likes & dislikes and by keeping in touch with them so that they feel secure physically as well as emotionally. One respondent said that *"my parents always try to fulfill their (grandparents) needs and keep in touch*

with them for all kind of their assistance". Only 11.25 per cent of female and 06.25 per cent of male students feel that their parents do not give proper attention to their grandparents due to the job work and separate house. One respondent said that *"because we live in a nuclear family and they live separately from us so there is no person to help or care for them"*. Only 10.00 per cent of female & 06.25 per cent of male students have no idea regarding this, because either they are living far from their family or they don't pay attention to family matter.

When we tried to know from respondents on the notion in Hindu culture that children and old are alike and hence, need same type of care, highest percentage (84%, *out of total 57 female students*) respondents from all classes of female students and around 87 per cent (*out of total 23 male students*) students agreed that old persons and children are alike and they also expect the same care as given to children. One of the respondents said *"Yes, because old age is such a stage of life where old people expect and demand same care and attention like a child and they love the attention and response of other people towards their talk"*. Another said that *"Old people mostly become ill and weak during this stage and deterioration of their physical and mental capacity is important reason, due to which they need same type of care as given to a child "*. Everyone knows that when people get old, their emotional and behavioral patterns also change according to age. One said *"At this stage their behavior becomes more exciting, aggressive and they want more love & attention. That's why we compare them with children"*. Very few respondents from all four classes disagree with this point. One said that "*No, it's not like that, caring an old is quite different from any child because child is on growing stage while old age is ending stage. A child needs care because of immaturity & an old-aged needs care because of inability."*

When we asked a question to the respondents whether they believed that talking to their grandparents and listening to their experiences is a good source of socialization? Most of the respondents (98%) from all classes of social science agreed that their grandparents are a big source of socialization specially their stories and the trend they are following from several years help in nurturing a child a lot. One respondent said *"because they have lot of knowledge and experiences of life as compared to us (younger), their knowledge helps us in various stages of*

life in being a social & civil person of society". In this sequence another said *"when a person listens to a real life incident of someone's life, it helps in learning quickly. Our grandparents share such incidents with us which happened with them in their life"*.

Living Pattern with Grand-parents

Table 5

Living with Grand-parents is Just an Adjustment and there is a Big Generationgap Between?

	Male	*%*	*Female*	*%*	*Total*	*%*
Yes	08	10.00	14	17.50	22	27.50
No	07	08.75	19	23.75	26	32.50
May be	04	05.00	16	20.00	20	25.00
Cannot Say	04	05.00	08	10.00	12	15.00
Total	19	28.75	57	71.25	80	100

On the question whether they agred that living with grand-parents is an adjustment till they are alive and there is a big generation-gap in between? 25.00 per cent (*out of 57 female respondents*) and 34% (*out of 23 male respondents*) from all four classes of Social Sciences firmly agreed that they mostly adjust with their grandparents in living setting due to high generation-gap between them. One says *"Due to dissimilarity of thought and values between old and younger it is a type of adjustment with them"*. Present generation wants personal space within their family and don't want others to interfere in their personal life & hence, lack of communication even within the family is gradually increasing the gap between the generations. Another says *"old people have always followed their traditional and ritual values and norms during their whole life while present generation has a logic based approach and has attraction towards materialistic and virtual world*". 33.30 per cent (*out of 57*) and 30.43 per cent (*out of 23*) respondents from all classes strongly disagreed with this point because they feel that their grandparents are a part of their family and their roots lie in them and so they are our identity in the society. One said *"It is not adjustment instead it is the process of bridging gap between the two generations"*. 35.08 per cent (*out of 57 female*) and 17.39 per cent (*out of 23*

male) of the respondents from all classes feel that generation-gap has occurred because of increasing westernization and it may be a reason for calling a living together just an adjustment.

Variance of Thoughts between Young and Old Generation

Table 6

Due to Variance of Thoughts Between Young and Old Generation, do they Make Adjustment in accordance with you

	Male	*%*	*Female*	*%*	*Total*	*%*
Yes	04	05.00	14	17.50	18	22.50
No	06	07.50	13	16.25	19	23.75
Sometimes	10	12.50	26	32.50	36	45.00
Never	03	03.75	04	05.00	07	08.75
Total	23	28.25	57	71.25	80	100

On the response from students for variance of thoughts between young and old generation & their adjustment, highest percentage (45.00%) of all respondents revealed that they make adjustment sometimes with their grandparents when they strongly stand for traditional and ritual norms instead of modern things. 22.50 per cent of respondents always make adjustment with their grandparents due to hyper eagerness and irritating behavior with them. While only 23.75 per cent of all classes' respondents agreed that they don't ever make adjustment with their grandparents because they are also a part of our life and their traditional thought need to be balanced with modern generation.

Generally we see in our society that old age people are neglected by the younger people for the caring and taking them outside home because of physical weakness and other reasons. But when we asked younger people regarding this, their perception and attitude seems different and always admit that they don't feel ashamed while taking them outside the home but they never take them outside. Majority of the students (93.75%) disagreed with this question and they thought that they felt proud when they take them outside with them. But in reality, few students are following this statement.

Discussion and Conclusion

India is the land of culture and traditions, where old values are still recognized in the stories of school books but today's reality is that the "Ministry of social justice and empowerment " reminds us to take care of our olds. We need campaigns and documentary films to become aware of our moral duties. If children are assets of Nation then old people too are our role models, and the responsible citizen of a country. It is our sole responsibility to protect and care our seniors. The concept of "nuclear family" may have secluded Grand-parents from its membership, but it is also equally true that without nucleus, i.e. the creator of family, the cell cannot survive.

Intergenerational programmes have benefited the children and helped children's academic performances and also improved children's positive social behavior (Friedman, 1997). A sense of appreciation for life is developed in the children. Through these activities they learn to see elders as valuable resources, learn value of elders in the family life and also learn respect for elders (NASSP bulletin, 1998). Batra and Bhaumik (2007) in their paper- Intergenerational Relationship, studied the present relationship as perceived by the respondents of three generations. For this purpose they selected those families in which at least one of the grand parents were alive and family had adolescent children in the age group of 13–18. The authors identified the areas of intervention (advocacy, peer counseling, health related issues, community based services and State intervention) to strengthen the relationship between grandparents, parents and grand children.

From the findings of the above study it may be concluded that the young generation is very much aware of the situations faced by the old persons during their later years but they fail to put it in practice. Increasing pressure of modern values like materialism, technological advancements and lesser emotive communication have led to the lack of intergenerational understanding. It is not a problem only of western countries as India is facing the same situation. Loneliness in old age is a very common problem every where. India society, which has strong cultural traditions, is being trapped between old and modern values.

Acknowledgement

The researcher sincerely thanks to Prof. J.P. Pachauri, HOD and Dr. J.P. Bhatt, Asst. Professor, Department of Sociology., HNB Garhwal University for their valuable guidance and suggestions. Without their help this paper could not have been completed.

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Indian Journal of Gerontology
2017, Vol. 31, No. 3, pp. 306–326

Health Care Access and the Elderly: Lessons Learnt from Gorai, Maharashtra

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ABSTRACT

The study was attempted to understand the self-perceived health profile, health facilities available, perceived challenges experienced by the elderly to access health care facilities; and to study the types of social networks playing a role in care-giving to the 67 elderly (male=29 and female=38) age varying from 60 years to 80 years, belonging to Gorai, a coastal semi-urban locality in the jurisdiction of Bruhan Mumbai Municipal Corporation (BMC). The data was collected using interview schedule. It was found that the perceived health status of the elderly is related to level of dependency on others, activities of daily living (ADL) and incidence of healthcare emergency. Distance and time required reaching a healthcare facility and lack of round the clock comprehensive healthcare infrastructure emerge as the key challenges to access healthcare. Rapport with the doctors is a key factor in seeking medical advice from them. The entire cost of healthcare and care-giving of the elderly is being borne by their families.

Key words: Health care accessibility, Gorai community, Cultural understanding of health, Care givers, Dependency among elderly

At the larger level, in a country where resources are scarce, healthcare is something that people invest at the end and largely for

curative purposes. This becomes evident with India's public spending on health being around 1.2 per cent of its gross domestic product (GDP). Under such circumstances elderly care takes a backseat as investment on them does not earn any evident benefits. The National Health Care Programme for Elderly 2010 envisages to improve access to healthcare for the elderly through community based primary health care approach and to invest on healthcare infrastructure and capacity building of the medical and paramedical professionals as well as the care-takers within the family for providing health care to the elderly. However, over a decade now, the policy hasn't concretised at the ground level. This absence of focus on geriatric (elderly) health is a matter of concern with the growing number of elderly.

The Concept of Accessibility

Access to health care is a key component to ensure that healthcare reaches to the needy. The most commonly accepted definition is given by WHO which explains accessibility as of physical accessibility/availability, financial affordability and cultural acceptability.

Physical Accessibility

Studies indicate that spatial proximity to primary health care is must for cost effective health care. (Joseph & Phillip, 1984) Transportation plays a key role in accessibility. (Hong & Hong, 1997) Physical accessibility also depends on a great deal on the presence of informal caregivers (Ibid.). Availability of someone to accompany to the healthcare facility is critical in case of elderly who are physically immobile (Balagopal, 2009).

Financial Affordability

Financial affordability means the ability of people to pay for facilities without financial hardship. It also includes opportunity costs such as transportation, loss of working days, etc. Financial considerations impact access heavily (Ibid.). Both government and private hospitals provide healthcare facilities but more than half cases of elderly are treated in government hospitals. Also, out of pocket expenditure of

healthcare can lead to impoverishment of households. In fact privatisation forces people to shell 10 to 11 per cent more on healthcare. (Tripathi, 2014). Therefore, availability of government hospitals is critical from the point of affordability. (Balagopal, 2009)

Acceptability

Acceptability comprises of willingness of people to seek healthcare facilities. This is determined by the attitudes including perceived threats, perceived severity, perceived costs and perceived effectiveness. Many of the problems such as joint pain (a symptom of arthritis) are ignored as not serious and as acceptable part of ageing. (Ibid.). Better information can significantly improve acceptability of health care (Hong & Hong, 1997). Information about various schemes and related facilities can create a positive attitude towards healthcare facilities. This is especially true in cases financial affordability is keeping people off seeking help. Perception of one-self as a burden on children also restricts people from accepting healthcare facilities (Balagopal, 2009). Very often elderly become dependent on their children. This gives them a sense of loss of autonomy and independence and consequently a sense of unproductiveness. So, they might not want to visit a healthcare facility as they don't see any use of it. Lack of faith in the effectiveness of the accessible healthcare facilities affects their acceptability (Ibid.)

Determinants of Accessibility of Healthcare by the Elderly

Remoteness of an Area

Remoteness of an area contributes to the spatial in inaccessibility of healthcare and the situation worsens for the elderly given their limited mobility resulting from disability or absence of someone to accompany them to seek healthcare. This is suggested by Hong &Hong in 1997 in their study on American Indian elderly (Hong & Hong, 1997). Similar patterns are suggested by studies in Australia (Leveratt, 2006–2007) Availability of transportation at affordable prices is crucial for accessing healthcare facilities. (Hong & Hong, 1997) This is especially true at times of emergency when availability of transportation becomes a matter of life and death

Informal Caregivers

Presence of informal caregivers affects the access to health, especially in case of elderly who need constant care. They help them in carrying out activities of daily life such as laundry, personal hygiene, fixing up appointments with doctors, transportation to and from health facilities, etc. (Ibid., 1997). Mostly it is these informal caregivers who accompany the elderly to the healthcare facilities and help them navigate through it. Most of the informal caregivers are women. (Nordmeyer, 2002)

Dependency among the Elderly

Traditionally, the elderly have been seen as integral to a family structure that is based on intergenerational reciprocity. It is found that the health of those elderly living with their sons/daughters is better compared to those living alone. (Bansod, 2009) However, other studies have pointed that living together need not always mean good quality of life (Shah, 1999). Factors such as inter-personal relations influence the ability of the elderly to negotiate for accessing healthcare facilities. As of 2004, above 70 per cent women and 30 per cent men among the elderly are totally dependent on others, which. This dependence includes physical, economical and emotional dependence. Spouses, own children, grand-children and others are the main stakeholders supporting and providing for this dependence. (Government of India, 2011)

Gender

Due to the longer life expectancy of women, on an average, women outnumber men in the elderly population (Rajan, 2006) Therefore it is important to have a look at the gender related issues in ageing and how it determines access to healthcare. Marital status determines the level of dependency on others and herby the level of access (Tripathi, 2014). This is especially true in case of widowhood. Most elderly men are married and have wives who are able to provide companionship as well as domestic support. In contrast, most elderly women are widows who lose companions as well as social status and become financially dependent on their children. The longer life

expectancy of women and the normative age gap between husband and wife make widowhood more likely for women than for men. (Sonalde B. Desai, *et al.,* 2005) Therefore women are more likely to face difficulty in accessing resources due to widowhood since widows are one of most discriminated individuals both at the familial and societal level. There is also a gender differentiation in the relative status of the elderly within a household. More elderly men occupy positions of power in a household than women. The majority of elderly men (81%) are accorded the status of head of household, whereas elderly women are more commonly found as either mothers of the head (44%), or the wife of the head (35%). To the extent that status within a family implies control over resources and comes with a certain degree of influence and obligation, being referred to as a parent may have implications for general well-being and access to care. (Ibid., 2001)

Financial Sources

According to Rajan & Aiyar, the coverage of insurance and pension schemes in India is very limited only to 9 per cent of rural males and 41.9 per cent of urban males who are in the formal sector; females (3.9% rural, 38.5% urban) (Dey, *et al.*, 2012). The rest of the workforce comprises casual and self-employed workers who are not entitled to formal retirement benefits. This population faces the dual challenge of remaining both healthy and employed in the old age. Many elderly continue to work till late into their 70s. However, due to their failing health they find it progressively difficult to find employment. Although many a times this income is supplemented by support from family members, low income or lack of independent income lead the elderly to cut down their expenses in general. This affects affordability. Since the informal sector has very little or no provision for paid leave, the workers – the elderly or the ones accompanying them to the healthcare facilities, incur loss on their wages. This affects physical accessibility of the healthcare facilities.

Cultural Understanding of Health

Defining Sickness and Health-seeking Behaviour

Sickness in different communities is understood differently. In communities with lower socio-economic status, symptoms like headache, joint pain, etc. is not considered as seriously and may go untreated for a long time. (Balagopal, 2009; Simon, 2014)

Cultural Barriers in Accessing Healthcare

Cultural and language barriers like customs, religion, caste, education, income, occupation and other socio-economic status impact health care access. The previous studies have indicated that language barriers and cultural differences contributed to the lack of communication between the elderly and their physician. (Hong & Hong, 1997) Belief in traditional medicine system is also higher. (Simon, 2014). Impact of education on one's health care knowledge and one's health-seeking behaviour has been well documented. (Behrman, 1996; Simon, 2014).

The healthcare accessibility for elderly is a challenging issue especially when it comes to elderly in disadvantageous conditions like living in remotes areas and belonging to lower socio-economic strata. The present study attempted to explore the challenges that elderly might face in the areas where health care facilities are inaccessible or meager and transport is inadequate. The elderly, being more susceptible to diseases, are prone to vulnerability and face multiple challenges in accessing healthcare facilities. The study sought to explore the challenges faced by the elderly in accessing healthcare facilities with an intention to feedback the findings into the TISS initiative – the proposed Gorai Field Action Project under Centre for livelihood and Social Innovation, TISS, Mumbai so the initiative can help the community with issues related healthcare accessibility.

Gorai is a coastal semi-urban locality in the jurisdiction of Bruhan Mumbai Municipal Corporation (BMC). It is located on the Dharavi island connected to the mainland from the Bhayander located in the North-West of Mumbai. There are also a number of ferry point that connect the place to other places in Mumbai such as Borivali and Malad. Dharavi Island is one of the remaining East Indian Catholic

localities in Mumbai. Since a large number of the East Indian Catholics have been traditionally engaged in fishing and agriculture, the elderly become repositories of knowledge gained through experience. Hence, elderly members are held in very high regard in these communities.

Marine water fishing and agriculture is the major occupation at Gorai. Tourism has been an important economic activity since last 20 years, when Essel World amusement park was set up.

However, the relationship between tourism and the traditional occupation is not a symbiotic one. Spread of tourism is driven by land acquisition, especially acquisition of the mangroves. The mangroves play a critical role in the protecting the delicate coastal environment of the area and it also provides breeding grounds for fishes. During the lean season of fishing in summer and monsoon when the catch with offshore fishing is not good, the mangroves act as back up for the fishermen. The entire Essel World amusement park is constructed on mangroves. This has not only reduced the size of mangroves but affected the quality of the backwaters surrounding it thereby seriously affecting the fishing prospects. Fishing in Gorai is also affected by the larger changes in the macro-environment such as offshore drilling, mechanised trawlers, rising fuel prices, etc. With regards to farming, market fluctuations renders prices of the produce highly volatile. The closure of the Byculla vegetable has taken away the key market for the produce in Gorai. Also the constant threat of land acquisition for the proposed Manori-Gorai-Uttan SEZ makes the future of agriculture questionable in the long run.

In the community the men and the women both play a direct role in the economic activities. While, the men go out at the sea and catch fish, women take up all the tasks at the shore-from sorting the fish to marketing it. In the agricultural communities, while the men till the ground, the women market the produce. This makes the women relatively independent than the women in other communities.

Gorai also faces another systemic issues – the issue of inadequate political representation within the electoral ward of BMC. It was incorporated within Mumbai in 1960. It was clubbed with places in the main Mumbai such as Borivali, which don't share any of the socio-economic, cultural or demographic profiles with Gorai. This rendered the people of Gorai politically voiceless as they turned out to

be minorities in the larger ward. Hence, its issues are not given adequate attention. This systemic issue have resulted in infrastructural issues such as limited transportation facilities, limited healthcare facilities and so on. Since, the public transport is mainly with the view of catering to the tourists, the issues pertaining to inadequate public transport for the local people remain unseen. There is no public transport – bus, auto or ferry – available after 10 PM. In a place where people cannot afford private vehicles, this is a challenge.

With regards to health, there is a dearth of viable healthcare facilities at Gorai. There are no healthcare facilities at night. The ones available at the day time face issues of inadequate amenities in terms of equipments, medicines, etc. When it comes to the elderly, illiteracy and disease add to the layers of vulnerability.

The issue of healthcare accessibility of the elderly required attention with the changes in the family structure. Lack of sustainable livelihood options in Gorai has caused youngsters to migrate in search of livelihood. But in last 5 years there has been hardly any local youth joining the traditional occupation. While the current bunch of elderly stay with their children, the situation makes it evident that the presently middle-aged population are unlikely to have their children around them since they have already migrated or are in the process of migrating to the main Mumbai city or elsewhere. Given the dependence of elderly on their children for all sorts of resources, this is a challenge. With age comes the primary issue of deterioration of health. Already, elderly are facing challenges in accessing healthcare. If these are left unaddressed, the problem will increase many fold when the present middle-age population ages because then there won't be any children around them to transport them to a healthcare facility. Hence access to healthcare facilities is crucial for the elderly.

The objectives of the study were:

1. To understand the social-demographic and health profile of the elderly (self-perceived)
2. To map the health facilities available for the general (primary) health care in the community
3. To understand the perceived challenges experienced by the elderly to access health care facilities.

4. To study the types of social networks available for the elderly.

Methodology

Sample

67 elderly (Male=29 and female=38), age varying from 60 to 80 years were selected purposely from the Gorai. Most of the respondents (81.9%) were in the bracket of 60 to 70 years of age (the young old). This was followed by those who were in the age group of 65 to 70 years of age (19.2%), followed by those in 75 to 80 years of age (10.4%) and 70 to 75 years of age (10.4%).

Leaving one, all the respondents were Christians. This is because the community is that of East Indian Catholics, the native inhabitants of this place. The non-Christian respondent in the sample, who was a Hindu, is a migrant labour. Most of the elderly in the sample were from the Koli (fishermen) caste (67.2%) while the rest were from agricultural castes (Kulbi-tillers (19.4%) – & Bhandaris-toddy-makers (11.9%) who were also engaged in agriculture). These castes are lower in the caste hierarchy. In India the settlements are arranged according to the caste. As this locality is related to those of lower rank, the locality is also more likely to be historically neglected. And the neglect stays even after conversion to other religions. .

59.7 per cent elderly had their spouses alive; 4.5 per cent were never married and 35.8 per cent were widowed. Of those who were married, 55 per cent were males and 45 per cent were females. All those who were not married were male. Among those who are widow/widower, 16.7 per cent were males while 83.3 per cent were females.

85.7 per cent elderly were illiterate. Illiteracy was highest among those engaged in fishing with 93.5 per cent elderly of this group being illiterate, followed by those engaged in agriculture 75 per cent and 55.6 per cent among those engaged in other professions.

95.5 per cent elderly were living in their own house. The community is the original inhabitants of the place. Hence, most of them had their own houses. 3 per cent lived in rented houses. Only 1 respondent lived with relatives. 85.1 per cent elderly were living with their children, of which 68.7 per cent elderly lived in a joint family

system. Such high percentage of joint families can be associated with allied factors such as

The mean annual family income of this sample was Rs 1,23,480.00.

Tool Used

An interview schedule was prepared to study the objectives of this study. The interview schedule contained 55 questions related to demographic information, information regarding general health, ailments and disability, access ability of health care facilities, medical consultations, medical care in health centres, care providers in the family, interactions with family, neighbors and community, financial issues and other related issues.

The participants' consent was taken before conducting the interview and they were being informed that they could leave the interview or decline to answer question they were uncomfortable with the questions. The comprehension of the participants was taken into account. The interview schedule was translated to the local language Marathi and a copy was shown to the literate members of the household of the elderly. Each respondent was interviewed individually. The questions were asked mostly directly to the elderly. However, in two occasions, the speech of the elderly was not clear and hence help was taken from other family members staying in the same household.

Appropriate statistical techniques were used in the analysis of data collection.

Findings and Discussion

1. *Disease profile :* 85.1 per cent elderly had some or the other health problems in previous one year. Ailment included mainly non-communicable medical conditions such as pain in different parts of body, lifestyle diseases, paralysis, cataract and fracture. A significant minority of 14.5 per cent elderly had health conditions requiring urgent attention. These conditions included renal calculus/kidney stone, Retina tear, Stroke, pulmonary edema, hysterectomy, mastectomy, UTI, nerve problem,

Hematemesis/vomiting blood, rectal bleeding, large intestine operation and cancer.

2. *Frequency of medical consultation:* 23 per cent visited doctor regularly. Regular check-up is required for life-style diseases like sugar-levels, BP, etc. 67.7 per cent visited doctor only when there was a need. And 9.3 per cent sought healthcare help only when they were seriously ill.
3. *Major issue in accessing healthcare:* Distance and time required to reach well-equipped medical facilities emerges to be the major challenge in accessing healthcare facilities.

Unlike the existing literature, that suggests that women are likely to face discrimination at the later years as they do throughout their lives. In the current study no such evidence was found in terms of the kind of healthcare facility utilised by the men and women. Majority of both males (74.1%) and females (81.6%) went private healthcare facilities over government health care facilities. This lack of difference in utilisation of health facilities according to sex or marital status is possibly because of the fact that there is only one government facility, i.e the BMC dispensary in the vicinity. Mostly people utilised private healthcare facilities available nearby and hence the similar pattern of utilisation of healthcare facilities. Another reason might be the fact that women in the community have been independent to travel over long distances to market their produce. This ensures that the women carry their independence as long as they are not physically dependent on others. This is a cultural strength in the community.

4. *Health Issues and Occupational Status:* 68.7 per cent of the elderly at the time of the study or earlier were engaged primarily into fishing, 17.9 per cent into agriculture and 13.4 per cent into other profession. Both fishing and agriculture require hard physical labour. This can have a multiple implication in later lives such as pain, arthritis, etc. 24.2 per cent of the overall sample were still working, rest retired.

Health Profile of the Population

1. *Self-perceived health status:* 41 per cent of the elderly perceived their Health Status as bad; 26.9 per cent as healthy, very healthy

(1.5%) and 1.3 per cent as alright. Self-perceived health status is an important determinant on when and how a person decides to seek healthcare assistance.

2. *Impairment among elderly:* 31.3 per cent report age-related impairment. Among those who had a disability, 55.6 per cent have multiple disabilities, while 22.2 per cent have hearing disability and another 22.2 per cent have other disabilities. In addition to this, majority of the elderly were illiterate and financially depended on others.
3. *Assistance required for activities of daily living:* 38.81 per cent elderly require some kind of assistance for activities of daily living. Of this, 19.2 per cent cases require assistance out of bed; 19.2 per cent cases require assistance for toilet; 19.2 per cent cases require assistance for bathing; 7.2 per cent cases require assistance to walk/move in the house; 50 per cent cases require assistance for walk out of house; 19.2 per cent cases require assistance for food and 37.7 per cent assistance for travel outside Gorai.
4. *Disease Profile:* 85.1 per cent elderly had some or the other health problems in previous one year. Of this 85.1 per cent, pain in different parts of body (27.7%) and lifestyle diseases (26.5%) occupies the top position. A significant minority of 14.5 per cent elderly had health conditions requiring urgent attention. These conditions included renal calculus/kidney stone, Retina tear, Stroke, pulmonary edema, hysteractomy, mastectomy, UTI, nerve problem, Hematemesis/vomiting blood, rectal bleeding, large intestine operation and cancer. This was followed by respiratory problems (10.8%); fracture (7.2%); paralysis (7.2%); dental & eye-related (3.65); and cataract (2.4%).
    a. Non-communicable diseases top the list with pain in different parts of the body and lifestyle diseases being the most commonly reported health problem. Pain in different parts of body can also be related to the fact that occupations such as fishing and agriculture require a lot of hard physical labour. Over the course of time this physical exertion manifests as pain in different parts of body.

b. 38.8 per cent elderly have had at least one event of emergency in their lifetime.

5. *Frequency of Medical Consultation:* Frequency of consultation is an important measure of health-seeking behaviour. 23 per cent visit doctor regularly. Regular check-up is required for life-style diseases like sugar-levels, BP., etc. 67.7 per cent visit doctor only when there is a need. And 9.3 per cent seek healthcare help only when they are seriously ill.
6. *Reasons for Preference of Medical Facilities:* There is a healthcare facility available to all the elderly population at a distance of 0–3 km. However, only 44.4 per cent people went to the nearest healthcare facility. The rest 55.6 per cent went to other healthcare facilities for the reasons such as – the doctor at the other facility is known (40%), medicine from those facilities are more effective (42.9%) and lack of facilities such as timings mismatch with the nearest healthcare facilities, unavailability of medicines and advanced facilities (17.1%). From the stated reasons it emerges that the people prefer a healthcare facility over the other primarily due to the reasons of rapport with a doctor and faith on the medicines prescribed by them.
7. *Allopathic/modern System of Medicine was the Main Medicine System Followed and Adherence to Medicine was Also High:* 96.9 per cent elderly completely adhered to medicine courses, whenever prescribed. This is very different from other studies where the elderly don't take medicines regularly owing to cultural beliefs. (Nandagavali, 2015).

Mapping of the Available Healthcare Facilities

Mapping of healthcare facilities is an important tool to understand aspects of physical and spatial accessibility. Residents of Gorai have to under-go the time consuming multiple transport system connecting Gorai to healthcare facilities. Land transport includes, municipality buses whose frequency is far in between and auto-rickshaws (sharing or reserve). Ferry is available for crossing over the creek to Borivali and Malad areas in Mumbai. However, post 10 PM, none of these public transports are available.

Table 1
Utilisation of Healthcare Facilities

Primary medical opinion/care facility/provider	*Percentage of elderly visiting the facility*14*	*Location*	*Mode of transport*	*Cost of transportation (to &fro)*
Church Nurse	25.4 %	Within Gorai (0–3 km)	Walk – 68.8%	Walk – Rs 0
			Bus or auto – 31.3%	Bus – Rs 10
				Reserve Auto – Rs 100
				Share Auto – Rs 20
BMC Dispensary	12.7%	Within Gorai (0–3 km)	Walk	Walk – Rs 0
Dr Waren (private medical practitioner at Gorai)	6.3%	Within Gorai (0–3 km)	Walk	Walk – Rs 0
Dr Chowdhary (private medical practitioner at Uttan naka)	15.9%	6 km from Holy Magi Church (reference point for Gorai)	Private vehicle–10%	Bus – Rs 20
			Bus or auto–90%	Reserve Auto – Rs 160
				Share Auto – Rs 32
Dr Milind (private medical practitioner at Manori)	4.8%	4 km from Holy Magi Church (reference point for Gorai)	Bus or auto – 100%	Bus – Rs 20
				Reserve Auto – Rs 120
				Share Auto – Rs 24
Private practitioner outside Gorai	22.2%			
PRIVATE HOSPITALS –	7.9%		Auto+ boat+bus/a uto	
Karuna hospital		13 from Holy Magi Church (reference point for Gorai)		1. + Boat+ Share Auto+ Reserve Auto= 158

Cont'd...

Cont'd...

			2. + Boat + Reserve Auto + Reserve Auto = 238
Shraddhaa hospitals		15 km from Holy Magi Church (reference point for Gorai)	1. + Boat + Share Auto + Reserve Auto = 202
			2. + Boat + Reserve Auto + Reserve Auto = 282
Shanti Dham hospital		17 km from Holy Magi Church (reference point for Gorai)	1. + Boat + Share Auto + Reserve Auto = 268
			2. + Boat + Reserve Auto + Reserve Auto =348
Government Hospital	4.8%	13 from Holy Magi Church (reference point for Gorai)	1 s + Boat + Share Auto + Reserve Auto = 158
Bhagawati Hospital			2 s + Boat + Reserve Auto + Reserve Auto = 238

*[14] *Figures excluding those who don't consult medical help and who call doctor home. N=63*

Majority of the elderly in the sample (25.4%) visited the Church Nurse – who was a trained nun. The reasons for this might be the fact that she lived in the locality allowing access to her. Also, she was associated with an institution – the Church – on which people have faith. However, her set-up had very limited infrastructure with no medicines and no diagnostic tool apart from a weighing machine, height measurement tool, stethoscope and a sphygmomanometer (BP apparatus).

12.7 per cent went to tertiary care hospitals directly. This includes people who visit private hospitals – Karuna Hospital, Shraddhaa Hospital and Shanti Dham Hospital- and government hospital- Bhagawati Hospital. These hospitals are located in Borivali and are well equipped unlike the primary care facilities at Gorai. This elderly visiting the hospitals directly were the ones who in past had an event of medical emergency. Hence, in order to avoid delay for any

kind of treatment – the elderly are taken to the hospitals directly for both follow up and in case of any other ailment. However, visiting these hospitals require a substantial amount and time given that these are located on the other side of the Borivali creek. Such a trip requires crossing the Borivali creek and is expensive both in terms of time and money required. The travel to these hospitals involves multiple types of modes of transport-bus, auto-rickshaw and boat. The cost ranges from 158 to 348.

Key Challenges In Accessing Healthcare Facilities

1. *Challenges in accessing healthcare at the primary medical opinion/care facility.* Lack of infrastructure, unavailability and/or unreachability at night tops the list with 30.2 per cent facing the issue. Unavailability of healthcare facilities at night leads to delay in treatment. This is followed by the fact that the distance and time required reaching a primary medical opinion/care facility outside Gorai is too much and 23.8 per cent face this issue. This also highlights the fact that many don't consider the healthcare facilities available within Gorai as viable alternative due to the reasons discussed above. 15.9 per cent find that the primary medical opinion/care accessed by them provide very basic treatment. This is followed by those who find the facilities overcrowded (11.1%). 3.2 per cent find the consultation time very short. Similarly, 3.2 per cent find the primary medical opinion/care accessed by them expensive while another 3.2 per cent find that there is no problem. The remaining 7.7 per cent face some of the earlier stated problems. 1.6 per cent faces other problems.
2. *Challenges in accessing healthcare at the emergency care facility.* Distance and time to emergency care are the greatest concerns with 48.1 per cent encountering this issue in accessing emergency healthcare. This is followed by issue of overcrowding (7.4%); unclean environment (3.7%); medicine ineffective (3.7%); indifferent attitude of the facility staff (3.7%); too many referrals (3.7%), all the given issues (3.7%) and some of the given issues (11.7%). 14.8 per cent didn't face any issues. Distance and time results in delay in caregiving. Emergency healthcare access in 70.3

per cent cases is moderately to severely delayed. Time taken to reach emergency healthcare facility – 29.6 per cent 2 to 5 hours, 11.1 per cent next morning 5 to 7 hours, 25.9 per cent 30 min to 1 hour, 18.5 per cent 1 to 2 hour and 14.8 per cent less than 30 min. Thus, 60.2 per cent cases the time required was more than 1 hour. If the time required to reach a healthcare facility is more than one hour, it can be life-threatening in emergencies such as cardiac arrest which require the patient to reach healthcare within the 1 golden hour. This delay in accessing emergency healthcare can be related to the fact that the nearest hospitals are located across the Borivalli creek and require multiple modes of transport. Also in 88.9 per cent cases of medical emergency, elderly were taken to emergency healthcare facility by public transport. Of this, 25.75 per cent involved using boat to cross the Gorai creek. 11.1 per cent used vehicle on rent.

3. *Majority visit private healthcare facilities due to inaccessibility of public health facilities.*
    a. Unlike other studies (Nandagavali, 2015), that show that most of the people with low socio-economic status visit Government healthcare facilities, in case of Gorai, the people visited private facilities because the options for government-run healthcare facilities are limited to a BMC-run dispensary that opens for only 4 hours. Utilisation of facilities of private medical practitioners was high with 49.2 per cent elderly visiting them for primary medical opinion.
    b. Many also cite lack of rapport with the doctors at the public healthcare facilities as an important reason for not visiting them.
4. *Compulsion to directly approach to tertiary care:* A significant percentage (12%) of the elderly travel over 12 km to access primary medical opinion/care at tertiary care facilities. This is because the nearby facilities didn't have diagnostic facilities and often medicines are unavailable.
5. *Out-of-pocket expenditure:* Besides infrastructural issues, non-utilisation of government schemes such as RSBY, old age

pension schemes, Senior Citizen's, etc. put financial burden on the caregivers of the elderly. 100 per cent healthcare treatment cost was being borne privately. Of this, 63.1 per cent borne by sons 9.2 per cent by daughters 9.2 per cent by spouse and 18.5 per cent by self. The reasons for this non-utilisation may be wide ranging from lack of awareness to systemic difficulties such as unavailability of required document. (Nandagavali, 2015)

Social Networks Related to Healthcare Accessibility

1. *Majority of the elderly lived in joint families:* Elderly played an important role in decision making in families. 50.7 per cent decisions are taken by elderly and their spouses. However, gender differences were noticed in decision making. In cases where the elderly was a male, most of the family decisions in the family were likely to be taken by him, while in case of female elderly, it was likely to be taken by the sons. Thus, men in general had a greater say in the decision making of the family.
2. *All the care giving was performed in the family and by the family members:* However, *major burden of care giving fell on the women* – both when it comes to accompanying the elderly to healthcare facilities and being their primary caregivers. At the same time they were also active earning member in the family. This means that the women in Gorai were carrying double burden of earning and taking care of the household. At the time of the study, they were able to fulfil these roles as majority of the elderly 85.1 per cent lived in joint families and the fact that it was a close knit community so they could ask others for help. But as the family structure is undergoing a change with a number of the youth below 20 years of age moving out of Gorai, in future care giving to the elderly will be a challenge

Recommendations

Bringing together the human rights approach to health-care accessibility with the NPCHE which focuses on improving access to healthcare of elderly at all levels-promotional, preventive, curative and rehabilitative-through community based primary health care approach, it is essential to implement this program to concretise healthcare for the elderly.

The study suggested that non-communicable disease and lifestyle diseases are predominant among the elderly in the community. These diseases require constant check-ups and monitoring. Hence, improving the healthcare infrastructure by investing on healthcare resources such as upgrading existing facilities to deal with the ailments of elderly is essential. The facilities such as BMC dispensary can be upgraded to a health post as per the guidelines of National Urban Health policy. It is not just enough to open healthcare facilities. Their utilisation depends a lot on the infrastructure and amenities that they have, operating hours, availability of medical staff and their rapport with the people. NHCPE emphasises on involving the community as a stakeholder in improving access to healthcare. This is important especially to build trust on the exiting healthcare facilities. The study found that an important determinant of preferring one healthcare facility over another is trust on the doctor and the facility. This implies that the existing healthcare facility especially the BMC Dispensary needs to reach out more to the given population. Along with this, provision of a well-equipped ambulance service is essential to take people to secondary and tertiary treatment facilities in case of any medical emergency.

Conclusion

Access to healthcare is dependent on a multiple social, economic, spatial, and cultural factors. Marginalisation at different levels-spatial in terms of being located in a relatively isolated space with inadequate transportation-makes Gorai difficult to access. This, coupled with the fact that elderly have a multiple disadvantages of ailments that require constant attention and dependence on others for physical and financial support, hinders their access to healthcare. As the number of elderly around the world and India increases, such hindrance would only increase and hence, it calls for finding strategies and solutions pertaining to the healthcare accessibility of the elderly.

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Indian Journal of Gerontology
2017, Vol. 31, No. 3, pp. 327–343

Experiences of IJAW Women Living with their Daugthers–in-Law in Bayelsa State Nigeria

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ABSTRACT

Among the Ijaws, mothers-in-law tend to benefit by relocating into their son/daughters-in-law apartment for better care, because it is culturally mandatory to assist and maintain traditional family systems to provide support to people when they get old. This study examined the experiences of Ijaw women living with their daughters-in-law. Semi structured in-depth interviews were conducted to explore the experiences of Ijaw women living with and receiving care from their daughters–in-law. One-twenty Ijaw women aged 40 to 96 participated in this study. Mothers-in-law complained of fever, gastro-intestinal disorders and heart related problems as well as a general trend of loss of close person, change of environment and social constraint such as suspicion, frustration, hostility, absence from home, harassment, the fear of being labeled and feeling about old age problems. It was found that highly educated mothers-in-law reported better health than less educated ones. Mothers-in-law accessibility to nursing care enhances their health status. Furthermore, non-widowed mothers-in-law experience good

psycho-social support than those that were widowed. In addition, both the quality of care received by the mothers-in-law and their health status are related to age. Finally, the level of income and cultural beliefs of the extended family members positively affected the level at which mothers-in-law felt socially supported. This study revealed that the experiences of Ijaw women living with their daughters-in-law had both positive and negative impacts on their health and psychological well-being.

Key words: Culture, Daughter-in-law, Extended family, Household, Ijaw woman, Mother-in-law.

Cultural expectations and the impacts of African traditional family system on mothers-in-law among the Ijaw has both positive and negative impacts on the family stability (Alagoa, 1999) and they are welcome by the sons and daughters-in-law with some areas of interest and also with areas of conflicts. In the present scenario, a rapid increase in the number of elderly especially women as well as their proportion in our population, has led us to be more conscious of the many social, economical, psychological and health problems of the elderly in our country (Swapnali and Suresh, 2014).

The family has traditionally been the major source of support and caregiver for the elderly (Adeyanju, *et al*., 2014) and all extended family units usually place authority in the hands of their oldest members; in turn the younger members of the family performed some functions for the continued existence of the family (Adewuya, 1981); such as taking care of mother-in-law and other dependents.

Supports received by the elderly are not regular and adequate (Okumagba, 2011). In times of need close family members should be the first to help elderly ones (Adeyanju, *et al.,* 2014). The duty of mothers-in-law is to reduce delinquency ((Fajemilehin, 2009) and to educate the young ones how to preserve the social norms that bind them together as well as teaching them how to avoid such practices that might work against the common interest of the family especially in the area of caregiving (Idris, *et al.*, 2012).

Among the Ijaws, mothers-in-law tend to benefit by relocating into their son/daughters-in-law apartment for better care, because it is culturally mandatory to assist and maintain traditional family systems to provide support to people when they get old; it is the best care

possible, care consistent with indigenous values, and all this at the lowest possible cost to society. When people reach old age, they are likely to have spouses and children who are able to assist them in times of need (Okaba, 1995) and (Alagoa, 1999) because elderly person considered many conditions to be the manifestations of old age and accept it as part of their life (Prasanta, *et al.,* 2014)

Traditional Roles of Mothers-in-law and Areas of Conflicts with their Sons and Daughters-in-law include: rivalry with their daughters-in-law and religion differences (Olatunde, *et al.,* 2006).

Aim of the Study

The increasing demand for mothers-in-law care coupled with changing family structures and competing roles for women is directly influencing the health and quality of attention received by mothers-in-law. This study sought to examine the experiences of Ijaw women living with their daughters-in-law.

Objectives of the Study

1. To explore the cultural factors that influence the care-receiving experience of the mothers-in-law.
2. To document the impact of living with daughters-in-law on mothers-in-law.
3. To identify the psycho-social problems and coping strategies of the mothers-in-law living with their daughter-in-law.
4. To document the roles of mothers-in-law in maintaining extended family structure in our culture.
5. To document the supports that are available for the mothers-in-law through the traditional family system of living with their daughters-in-law.

Hypotheses

1. Educational status of mothers-in-law living with their daughters-in-law will determine the health status of majority of them.
2. The social support of majority of mothers-in-law will vary with their marital status.

3. Easy accessibility to nursing care will affect the health status of majority of mothers-in-law living with their daughters-in-law.
4. The psycho-social support received by the majority of the mothers-in-law will vary with their economic status (level of finance).
5. The cultural beliefs of extended family structure will vary with the psycho-social support of majority of mothers-in-law

Methods

The Setting of the Study

The study was carried out in some selected local government areas in Bayelsa state which comprised Southern Ijaw, Yenagoa, and Kolokuma / Opokuma local governments. Stratified simple random sampling method was used in selecting the three local governments by dividing Bayelsa state into three (3) based on senatorial districts. One local government each was randomly selected from each of the 3 senatorial districts and the comprehensive health centers in each of the three local government headquarters were selected to locate the respondents significant others. The three comprehensive health centers selected were: Ogbia, Yenagoa and Sagbama comprehensive health centers representing Bayelsa East, Central and West senatorial districts respectively. Bayelsa state is one of the thirty six states of Nigeria. By 1991 census, Bayelsa state had a population of 1,121,693 spread over a land area of 12,000 square kilometers. For the purpose of this study, the local government headquarters were used for easy data collection. Bayelsa state was selected as the universe of the study because of its numerous cultural orientations and histories of several traditional towns which not only define the original culture of Ijaw race but also possess a very significant number of aged mothers-in-law with outstanding experience. Their major languages are 1zon (Ijaw), Epie, Ogbia and Pidgin English.

Instrument

A semi-structured interview guide developed by the researchers was used to collect data on the socio-demographic characteristics, health status and psycho-social conditions of the respondents.

The interview was conducted in English language, and in Pidgin English for the less educated respondents, the interview was tape recorded, transcribed and interpreted afterward by the researchers. The content validity and reliability of the instrument was established and test, rest coefficient of 0.82 was established.

Procedure

The researchers right away from the comprehensive health centers obtained the home addresses and telephone numbers of the women (either pregnant women or nursing mothers attending post natal clinics) that live with their mothers-in-law in the same household, who are attending either antenatal or postnatal clinic of the comprehensive health centers in each of the 3 selected local government headquarters in Bayelsa state. The women were informed and their consents were gained that their mothers-in-law would be used as participants for research purposes. Researchers book appointment with each of the women (daughters-in-law) separately. All the daughters-in-law that volunteered acted as facilitator between the researcher and their mothers-in-law. The time and date for the interview was made convenient for both the interviewers and the respondents either through their son or daughter-in-law.

In addition, twenty eight mothers-in-law who personally brought their grandchildren to post natal clinic for immunization were also recruited directly for the study; and their addresses were collected.

Daughters-in-law were the first point of contact in the comprehensive health centers, who now introduced the researcher to the respondents, this enhances high response rate, interpersonal relationship and made them to be cooperative.

Forty mothers-in-law per local government selected were used. Random samplings were used to select among the daughters-in-law who volunteered for their mothers-in-law to be used.

The information obtained from audio tapes and observations was transcribed word for word by the researchers in English. After the family heads or their sons had permitted the researchers to interview the mothers–in-law to participate in the study confidentiality was assured. Data collection took 30 weeks. The mothers –in-law were

interviewed separately. Each session lasted between 30 to 40 minutes with an average of 35 minutes.

Design and Participants

The study was a survey. The participants were 120 purposely selected mothers-in-law of 124 daughters-in-law that lived with their daughters-in-law, attending either the antenatal or post-natal clinics; whose ages averaged 51.5 years with a range of 40-96 years. The respondents were not restricted by age and 93 were between 40 to 60 years, 19 were between 61 to 75 while 8 were between 76 and 96 years.

Eighty nine (74.17%) of the respondents were in polygamous marriage, Eighty six (71.67%) of them were Christian while 31 (25.83%) of them were self-employed. Fifteen (12.5%) of the respondents had no formal education, fifty two (43.3%) had primary education, forty four (36.67%) had secondary education and the rest nine (7.5%) had higher education. Majority of the respondents (44) were farmers and fishermen while thirty seven (30.83%) of them were full housewives. Seventy eight (65.0%) of the respondents had lived with their son with 2 or more wives.

Table 1
Number of Years that Mothers-in-Law had Lived with their Daughters-in-Law

S. No.	*Number of Years*	*Age Group (yrs) 40–60 (n=93)*	*Age Group (yrs) 61-75 (n=19)*	*Age Group (yrs) 76-96 (n=8)*	*Total (n=120)*
1.	1-5 years	65(69.89)	09(47.36)	02(25.0)	76(63.33)
2.	6–10 years	21(22.58)	04(21.05)	02(25.0)	27(22.5)
3.	11–15 years	05(5.38)	03(15.79)	02(25.0)	10(8.3)
4.	More than 16 years	02(2.15)	03(15.79)	02(25.0)	07(5.83)

Figures in parenthesis indicate percentages.

About 76 (63.33%) of the respondents had lived with their daughters-in-law for between 1 to 5 years, while 27 (22.5%) had lived for between 6 to 10 years with their daughter-in-law. 10 (8.3%) had lived with their daughters-in-law for between 11 to 15 years. Only 7 (5.83%) of the respondents had lived with their daughters-in-law for more than 16 years.

Data Analysis

The numbers and percentages of the respondents in each group and responses category were determined, person's chi-square test was used to assess the number of mothers-in-law in the categories were significantly different with respect to health, differences and psycho-social variables.

RESULTS

The common health problems of the respondents include swelling of legs as a result of immobility (26.67%), heart-related problem (22.50%), backache

(15.83%), fever (9.17%), diarrhea and indigestion (8.33%) hearing impairment and eye problem (7.50%), Asthma (6.67%), and skin disease 3.33%).

Table 2 revealed that mother-in-law complained of psycho-social problems such as living and depending on another person (25.83%), feeling nostalgia (15.0%), poor social support (12.51%), death of close partner / person (9.17%), harassment from in-laws and grand-children (8.3%).

Table 2
Psycho-social Complaints of the Mothers-in-Law

S.No.	*Psycho-Social complaint*	*Age Group (yrs) 40–60 (n=93)*	*Age Group (yrs) 61-75 (n=19)*	*Age Group (yrs) 76-96 (n=8)*	*Total (n=120)*
1.	Harassment from in-laws/grandchildren	07(7.52)	02(10.52)	01(12.5)	10(8.33)
2.	Boredom	04(4.30)	02(10.52)	01(12.5)	07(5.83)
3.	loneliness/isolation	09(9.67)	02(10.52)	01(12.5)	12(10.0)
4.	Less social freedom/hostility	12(12.90)	02(10.52)	01(12.5)	15(21.51)
5.	Poor social support	08(8.60)	02(10.52)	-	10(8.33)
6.	Suspicion	08(8.60)	02(10.52)	01(12.5)	11(9.17)
7.	Death of close partner/person Absence from home/feeling	14(15.05)	03(15.79)	01(12.5)	18(15.0)
8.	Nostalgia Living with/under another person.	26(27.95)	03(15.79)	02(25.0)	31(25.83)
9.	The fear of being labeled	05(5.38)	01(5.26)	-	06(5.0)

Figures in parenthesis indicate percentages.

Majority (27.95%) of the mothers-in-law that are between ages 40–60 were complaining of feeling nostalgia. About (8.33%) of the mothers-in- law said their daughters-in-law that are not of Ijaw origin (from other tribe) in case of inter tribal marriage give some food items that are regarded as taboos in Ijaw culture to their grandchildren because the foods are not forbidden in the daughters–in-law culture.

Table 3

General Complaint/Experience of Mothers-In-Law

S.No.	*Items*	*Age Group (yrs) 40–60 (n=93)*	*Age Group (yrs) 61-75 (n=19)*	*Age Group (yrs) 76-96 (n=8)*	*Total (n=120)*
1.	House keeping	03(3.22)	01(5.26)	-	04(3.33)
2.	Division of chore between husband and wife.	16(17.20)	03(15.79)	02(25.0)	21(17.5)
3.	Parenting style	05(5.38)	02(10.53)	01(12.5)	08(6.67)
4.	Taboos	O7(7.52)	02(10.53)	01(12.5)	10(8.33)
5.	Food additive	12(12,90)	03(15.79)	01(12.5)	16(13.33)
6.	Absence from traditional meetings	14(15.05)	02(10.53)	01(12.5)	17(14.17)
7.	Sleep pattern disturbance	16(17.20)	03(15.79)	01(12.5)	20(16.69)
8.	Disobedience by the daughters-in-law	15(16.13)	02(10.53)	01(12.5)	18(15.0)
9.	Missing their pets	05(5.38)	01(5.26)	-	06(5.0)

Figures in parenthesis indicate percentages.

Data on hobbies for mothers-in-law indicated that 25 per cent of the mother-in-law engaged taking care of small children (grand-children), 21.67 per cent of the women engage in telling stories and tales to people especially to small children and daughters-in-law, educating daughters-in-law about culture and tradition (17.5%) acting as receptionist and entertainers of visitors 15.0 per cent. The same percentage (5.83%) respectively engages in domestic activities and preparation of local herbs. Also 5.0 per cent engage in relaxation through music, visitation and social gathering.

Table 4
Mothers-in-law hobbies.

S. No.	*Items*	*Age Group (yrs) 40–60 (n=93)*	*Age Group (yrs) 61-75 (n=19)*	*Age Group (yrs) 76-96 (n=8)*	*Total (n=120)*
1.	Telling stories	21(22.58)	03(15.79)	02(25.0)	26(21.67)
2.	Taking care of small children.	24(25.80)	04(21.05)	02(25.0)	30(25.0)
3.	Domestic activities e.g. cooking.	04(4.30)	02(10.53)	01(12.5)	07(5.83)
4.	Preparation of local herbs/concoctions	06(6.45)	01(5.26)	-	07(5.83)
5.	Educating daughters-in-law about culture and tradition.	17(18.28)	3(15.79)	01(12.5)	21(17.5)
6.	Visitation and social gathering	04(4.30)	02(10.53)	-	06(5.0)
7.	Exercise	04(4.30)	01(5.26)	-	05(4.17)
8.	Acting as receptionist/entertainment of visitors	12(12.90)	03(15.79)	02(25.0)	18(15.0)

Figures in parenthesis indicate percentages.

A Pearson chi-square test was used in table 5, the results showed that more than 45.83 per cent of the respondents who did not have more than primary school education also had poor health status while 36.67 per cent of those who had at least secondary school education reported good health [x^2 (2) = 94.44, P < 0.001].

Table 5
Summary of Chi-square Showing the Influence of Convectional Education on Health Status of Mother-in-Law

Categories	*F*	*%*	*df*	*X 2*	*P*
At most primary education/poor health	55	45.83			
At most primary education/fair health	08	6.67			
At most primary education/good health	04	3.33	2	94.44	<0.001
At least secondary education/poor health	04	3.33			
At least secondary education/fair health	05	4.17			

Table 6
Summary of Chi-square Showing the Influence of Accessibility to Nursing Care on Mother-in-Law Health Status

Categories	*F*	*%*	*df*	*X2*	*P*
Strongly affect	70	58.33			
Affect	18	15.0	3	71.27	<0.001
Do not affect	17	14.17			
Strongly do not affect	15	12.50			

A Pearson chi-square was used and presented in table 7. Most of the mothers-in-law that were non-widowed (57.50%) reported they had good psycho-social support. While only 9.17 per cent of the mothers-in-law that were widowed indicated that they experienced good psycho-social support [$X^2(2) = 30.19$, $P < 0.001$].

Table 7
Summary of Chi-square the Influence of Marital Status on Psycho-social Support

Categories	*F*	*%*	*df*	*X2*	*P*
Widowed psycho-social support poor	17	14.16			
Widowed psycho-social support fair	08	6.67			
Widowed psycho-social support good	11	9.17	2	39.92	<0.001
Non-widowed psycho-social poor	10	8.33			
Non-widowed psycho-social fair	05	4.17			
Non-widowed psycho-social good	69	57.5			

The extent to which accessibility to nursing care during the period of staying with daughters-in-law influenced the health status of mother-in-law was also evaluated. As shown in table 8, more than 70 (58.33%) of the mothers-in-law reported that accessibility to nursing care strongly affected their health status positively. [X^2 (3) = 71.27, $P < 0.001$].

Table 8
Summary of Chi-square Showing the Influence of Accessibility to Nursing Care on Mother-in-Law Health Status

Categories	*F*	*%*	*df*	*X2*	*P*
Strongly affect	70	58.33			
Affect	18	15.0	3	71.27	< 0.001
Do not affect	17	14.17			
Strongly do not affect	15	12.50			

About 17 (14.17%) of the mothers-in-law that earned low income indicated that poor psycho-social support while Fifty two (43.33%) of the mothers-in-law that earned high income experienced good psycho-social support while only 6.67 per cent of the respondents that earned low income experienced good psycho-social support. [X^2 (2) = 27.28, P < 0.001].

The extent to which the cultural beliefs of the extended family structure influenced the level at which mothers-in-law felt socially supported was also evaluated. As shown in table 9, more than 55 per cent of the mothers-in-law reported that cultural beliefs of the extended family members affected the level at which they felt socially supported

[X^2 (3) = 60.0, P < 0.001].

Table 9
Summary of chi-square showing the influence of cultural belief on the extended family structure on the mother-in-law level of received psycho-social support

Categories	*F*	*%*	*df*	*X2*	*P*
Strongly affect	66	55.0			
Affect	24	20.0	3	60.0	< 0.001
Do not affect	18	15.0			
Do not strongly affect	12	10.0			

Mothers-in-law that were less than 50years with poor health status were 5.83 per cent while 59.17 per cent of the respondents with good health status were less than 50 years in age while 11.67 per cent of

mothers-in-law that are 50 years and above had good health status[X^2 (2) = 21.76, P $<$0.001].

Discussions

Skin diseases, diarrhea and indigestion were reported by the mothers-in-law and this might be as a result of the unhygienic feeding, unfamiliar food, and living conditions of the mothers-in-law. The less mobile and sitting posture as well as living either in an unfamiliar environment or strange place where they have no friend to visit or place to stroll might have caused indigestion, backache and swellings in the legs among the mothers-in-law. Back pain, eye problems and hearing impairment were also common among the mothers-in-law, this was supported by (Swapnali and Suresh, 2014) that the diseases specific to women and other natural biological processes which the women may undergo, could be some of the reason for the overall low health status of women.The health problems tend to increase with advancing age and very often the problems aggravate due to neglect, low economic status, poor nutrition, and inappropriate dietary intake.

Mothers-in-law complainted of psycho-social problems, this might be as a result of living with another person. Fajemilehin and Feyisetan (2000) reported that living with another person and being a care receiver tend to compound the ill-feelings that are associated with ageing with associated loss of self-worth and social network.

An assessment of the mothers-in-law's evaluation during the time they have been living with them indicated that mothers-in-law agreed that their daughters-in-law paid much attention to their health, financial, psychological and social needs. This result is not surprising because women know how to care for themselves, caring is women's job, daughters-in-law caring for mothers-in-law could be an indication of young women's solidarity for aged women. Few respondents claimed their sons were their primary caregiver.

Additionally, the respondents claimed they were experiencing hostility because their daughters-in-law accused them of either interfering or criticizing their daughter-in-law family structure due to the type of advice they normally give them especially concerning the division of chore between the husband and wife. The respondents, complained of alternation in steeping patterns because they now have

less and interrupted sleep because they are not in their personal apartment that they have been used to; they only claimed they are happy because they have their grandchildren around them, these compensated for their pets like cats dogs, birds and other domestic animals they have been missing as well as their absence from their indigenous home and traditional meetings. Mothers-in-law accepted and learnt about their daughters-in-law's generation, culture, nationality, age and mindset which might be different from that of mother-in-law, especially in the area of taboos and abominations.

Respondents claimed that their daughters-in-law complained that care giving role is time consuming and that it entails sacrifices, it involves task commitment, and a lot of endurance. They further claimed that receiving care has changed some areas of their sons' and daughters-in-law's family life. These include work performance, time for recreation, their own physical and emotional health, finances, relations with other siblings and other family members' plans for future, and concerns, feelings and psychological disturbances towards their own aging.

Data on hobbies for mothers-in-law indicated that some of the mothers-in-law engaged taking care of small children (grandchildren), this was agreed to by Wentowski (1985) that grandmothers had to delight in visiting their grandchildren, because this give them the opportunity to know the children, keeping abreast of their growth and development and chances to enjoy the touching and affection provided by young children. Also educating daughters-in-law about culture and tradition gave primacy to the continuity of the house hold and the need for the young wife to learn from the mother-in-law about culture and tradition of their husband.

Conventional education could also determine the health status of mothers-in-law. Hypothesis 1 was confirmed by this result. Conventional education provides opportunities for employment and knowledge about health–related issues. These might have instilled some confidence in the mothers-in-law and enable them to face the emotional and psycho-social stress and strains involved in receiving care under the daughter-in-law rather than intergenerational bonds. Chao and Roth (2000) in their findings also supported this that most ageing person prefer to live at home rather than in institutions and an

assessment of the extended family should include organization, coping strategies and the impact of illness or dependency on the family system, therefore as society changes and more women enter the work force, fewer family members will be available to care for an increasing population of elders, with the increasing complexity of modern life, the cultural expectation of assuming responsibility for an in-law's care to any family member will be altered.

Since there are clear links between age, income and the quality of care received as well as their health status depends on economic status. This was confirmed by WHO (1992) reports and Fajemilehin (2009) that there are clear links between health and income because income is more easily measured than other aspects. Level of income per person in country is only one among many social, economic, cultural and political factors that influenced people's health.

The test whether the marital status would determine the percentage of mothers-in-law with good psycho-social support showed that most of the mothers-in-law that were non-widowed reported they had good psycho-social support. This was supported by Baron, *et al*., (1980), Fajemilehin, (2003) Fasoranti and Aruna (2007) that widowhood experiences are generally a trauma but in some African societies they are considered more as an experience of deprivation, subjugation, and humiliation.

The level of income of the mothers-in-law is strongly related to their psycho-social support and the higher the income, the higher the psycho-social support received by the mothers-in-law. A proportion of mothers-in-law in low social-economic status spent higher proportion of their live in poor health with little familiar support from the household because greater proportion of the higher income respondents participated in social activities with their sons and daughters-in-law compares to low income group. For both the poor and higher income groups, proximity to children was a crucial correlate of exclusive involvement with children, the poor relied upon help as well as social interaction from children as opposed to those with higher income, who did not rely as greatly on help from children.

Nursing Implications

Increasing demand for mothers-in-law care coupled with changing family structures and competing roles for women is directly influencing the health and the quality of attention received by mothers-in-law who live with and receive care from their daughters-in-law.

Elderly women in Ijaw prefer traditional medicine because most of them inherited the practice from either their mother or from their mothers-in-law for the treatment of their grand-children. Furthermore, Olatunde, *et al.,* (2006) wrote that the earlier ancestors of man, apart from identifying food plants and cultivating them, also learnt to use herbs for medicine. The process of determining the efficacy of such herbs must have emanated from a careful experimentation and observation. Today in our traditional societies, the use of herbs for curing various ailments is still in practice. There have been cases of traditional medical medicine using herbs successfully where western orthodox medicine had failed.

Conclusions

This study revealed that the experiences of Ijaw women living with their daughters-in-law had both positive and negative impacts on their health and psychological well-being. Their complaints were gastro-intestinal disorders, lack of nursing care, change of environment and social constraints like hostility, harassment, labeling and feeling about old age. Future studies should compare the experiences of fathers-in-law and mothers-in-law in order to ascertain whether sex is really a salient factor in the experiences of the parents-in-law.

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Indian Journal of Gerontology
2017, Vol. 31, No. 3, pp. 344–354

Forceful "Social Ageing" through Economic Disengagement in India

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ABSTRACT

Ageing, a normal and inevitable process of growth and maturity is culturally and socially defined as the stage where certain social, cultural, psychological and economic limitations are imposed on the old adults. This has severe consequences for them irrespective of gender, class and caste especially in Indian context. This article deliberates on the subject of age and its consequences of economic retirement in India which forcefully makes one unproductive and hence old. Rise in life expectancy signifies an increased capability in the productive life as a wage earner, but the fixed retirement age from economic production overlooks this possibility and has severe consequences for the individual, immediate family and society at large. This, in a way reflects the conservative and indifferent attitude of the system towards new social and demographic structure and limits the scope towards providing a happy and secured life to its citizens. The crime rates against the old adults which is increasing at an alarming rate reveals the insecurity with which they live along with an increased structural dependency. The country will be a developed country only when each and every citizen is given a fair chance to lead a happy and a secured life without any bias .

Keywords: Economic Disengagement, Forceful Ageing, Exchange Entitlement.

The normal biological growth of human being is socially defined and constructed through the process of ageing. The physiological and biological inevitable process of growing old has crucial social and cultural aspect which is often accompanied with gradually changed social structure for the old adults. This is imposed on the individual with a restricted accessibility to various resources, power and prestige and consequently a change in social positioning.

Age is a biological graded category but at the same time a cultural category and with its meaning and significance varying across time and space. Like gender or caste system of India, age is socially projected as a purely natural division. With passage of time, the successive stages of individual life is accompanied with declining age set and prestige i.e. various roles and responsibilities of individual that varies over time and these transition from one age grade to the next are often socially celebrated events marking the change of social status and role and accompanied with an age grade system of stratification or a system of inequalities which is very often considered normal.

With advent of industrialization, the recognition of wage labor and working class system along with a fixed age of retirement from external production have resulted in categorizing the aged as nonproductive and a burden. Because of productive incapability or lessened ability as economic productive member, both the old and young are perceived and treated as relatively incompetent and excluded from much social life. The young however has a better future prospects of being economically productive hence enjoy a different status even though they are unproductive for some time but this is absent for the old who have already given their best in this sector and it is assumed that there is nothing more to offer. This social process of "ageism" or discrimination or the holding of irrational and prejudicial views about individual or groups based on age under a false stereotypical assumption about a person's physical or mental incapacities leading to the a process of deprivation and structural dependency by excluding the elderly from the labor market and other significant social roles. (Ethel Shanes, *et al*., 1968)

The disadvantaged and marginalized category in India such as the ST, SC and women are considered so because of the historical deprived situation and other denials of opportunities have disenabled them to

be educated and rise to their full potential in the society. Such a perception can shift any male or female senior adult into the group of the disadvantaged in later stage of life which has a severe social and psychological consequence.

The social structuring of the various institutions gets differently interpreted for them and slowly they get disengaged from the worldly affairs. This retired phase as a perfect stage for so called contemplation is socially floated and accepted to be right for any individual at that stage of life when she or he is free from responsibility of the family. The choice of participation in the interaction and interrelation becomes restricted and borrowing Amartya Sen's concept of mental metric of utility, when the hardship is accepted with a submissive acceptance to the new situation and trying to find happiness in simplicity with no desire or ambition to overcome the unsatisfactory positioning in society. There is a sudden transition of social role which is equally a burden for any individual, family and society.

Ashrama System of Indian Hindu Social Order

The ancient Hindu tradition of ashrams system emphasized that in order to get salvation or Moksha one has to go through the four systematic orders of life in perfect sequences. According to the theory, there are four orders, order of students, the order of householders, order of ascetics, and the order of hermits. If the person follows this then he or she is in a position to attain Moksha or salvation. Based on the assumption that the expected lifespan of any person was 100 years and each stage is likely to last for 25 to 30 years. The third stage that is the Vanaprasta which starts from the 50th year of individuals' life as it is expected that individual will live till 100 years. With the 75th year as appropriate age for social retirement and completion of ones' responsibility can be equated with the prevailing situation and condition of modern society, but in a modified and distorted form of social consequences which comes with the economic detachment at the age of 60 to 62 years through the process of retirement from employment government or private sectors.

Amartya Sen: Failure of Entitlement, The Inability of People to Buy or Otherwise Obtain Food

Specific socio-cultural economic construction of old age varies across culture, space and time. Stereotyping the category and an assumed homogeneity among the aged has always been problematic and has overlooked the class, race and gender as well as culture. For example, old age is not perceived as an issue for males with political power whereas it is a handicapped category for a normal old person. Similarly people who are entrepreneurs or involved in their own business, rarely quit because of their age.

Amartya Sen in the context of starvation has described ones position in the economic class structure as well as in the mode of production determines ones "Exchange entitlement" that is a set of ownerships of individual that varies with ones relationship with the economic system existing in the society. The quality of exchange entitlements i.e. any person's ability to avoid starvation and help in ones sustenance and maintenance. In the life of a normal wage earner, the systems of guaranteed employment through wages provide that exchange entitlements adequate to avoid starvation.

Social security after the collapse of individual's economic association through retirement is a tool that helps to overcome any lacunas or gaps in the exchange entitlement and ones lesser position after detachment from the economic modes of production. But in Indian situation with an overburdened economy, it is a tremendous pressure on the government to look into the need of each deserving individual.

Social and Economic Consequences of Failure to Maximize the Demographic Dividend of India: Burden on Society and Increase in Liabilities

Social demography and social phenomena are interlinked, supplementary and complementary to each other. Social phenomena are often the result of changes in population structures, composition and processes. Social structure and processes regulate demographic process hence social reasons account for population trends. An unequal distribution of economic resources among people result in deprived situation and in extreme situation lead to poverty and starvation. Population dynamics is important as it crucially affects the

developmental prospects of a nation as well as the health and well being of its people.

Who are the Old Adults?

The adults in the age group of 60–74 years are defined by WHO as aged. The categorization of old adults as:

1. Between the ages of 60–75 years are the Young Old-.
2. Between the ages of 75–85 years are the Old-Old-.
3. 85 years and above are the Very Old

The Census of India has adopted 60 years for classifying a person as old, and this is the same age for retirement in government sector. The demographic trends with increasing longevity, a declining birthrate and a greater proportion of population over 65 in India have created a new social order with unfortunately a limited profit of demographic dividend. The need for creation of better and more employment opportunities for the mass of youth and a need for a new perspective towards the economic, knowledge and experience potentiality of the elderly. Utilizing this Demographic window of opportunity through channelizing knowledge economy and reorienting the political power dynamics through policies of self reliance of the old adults will certainly go a long way to remove the paradox of loss of entitlement through economic disengagement.

Since India has a low social security base people want to work as long as possible to support themselves and their family. Ageing population being debarred from economic wage entitlement and its implication is profound, extending far beyond the individual older person and the immediate family, touching broader society and the global community in unprecedented ways. Old population is heterogeneous in nature because of difference in age, sex, ethnicity, education, income and health. Older women are more vulnerable to discrimination, less accessibility to health care, nutritious food, right in the ownership of property and social security with only a regular source of income of a merge pension. Similarly older men are less integrated in the social network and are forced to accept and live in a financially insufficient condition and a un-utilization of their skill and experience. With an increase in the instances of working parents,

childcare become their responsibility. It gets further complicated with expensive health care system which can drain out the whole saving after retirement at one go. The societal assumption of ageing has economic consequences such as a lowering output, decreasing employment opportunities for youth if they are in the employment roll and an increased dependency ratio. The complexity of ageing brings a new social order with its economic implication in terms of labor supply, consumption pattern, investment and private savings results in decline of the economic capacity for the elderly to sustain himself and his family.

There is social disengagement and voluntary isolation by the process of social ageing. Social construction of the normal process of biological ageing into a sudden inability to perform as an efficient member of the society which in turn curtails the social interaction and social accessibility to power and prestige is socially persuaded and supported by social concerns and values which is neither an embarrassment nor a unique problematic selection and discrimination in any known modern society. Leading a healthy life, being adequately nourished, preserving ones self respect and socially able to interact with each other with dignity defines the content of human freedom and is a reflection of the nature of human life lived in any society which becomes little too difficult to achieve with economic disengagement, the transition from economic active producer to non productive elder often leads to a social cut off leading to isolation. (Strnadová, Cumming, M., 2016)

Social isolation often results in psychological and clinical problems such as higher rates of morbidity and mortality (Brummett *et al*., 2001) depression (Heikkinen and Kauppinen, 2004) cognitive decline (Wilson, *et al.,* 2007) among the older generation.

In a research conducted in India due to loneliness in their life, older persons were found suffering from a mental state of feeling of unhappiness and dejection, uneasiness with increased trauma levels and a reduced self-esteem and there is a greater chance of an increased substance abuse or smoking. (Age well Research Report, 2010)

Crime rate in India against the old also reflects an increasing vulnerability. A total of 18,714 cases of IPC crimes against senior citizens were reported during 2014. (NCRB, 2014)

Types of IPC crime	*Number of cases in 2014*	*Percentage*
cheating	1,567 cases	8.4%,
robbery	1,184 cases	6.3%,
murder	1,115 cases	6.0%
grievous hurt	1,069 cases	5.7%
Total cases	18,714 IPC crimes	

The Theoretical Positioning of the Policy of Socially Decided Retirement Age: Identifying the Gaps

The actors having at his disposal the means to pursue the socially approved ends are limited by values and norms of the society as given by Talcott Parson which gets reflected by the socially decided norms of retirement age. This symbolizes the onset of old age which is signified by a rites of passage to unproductiveness that limits the options of means to the goal for a happy meaningful productive life for any old adult in today's modern society. Thus it becomes a deterministic influence and the idea of the choosing actor disappears.

This type of economic unproductively results in a closed and restricted social interaction for this category of social actors resulting in a particular class which is a dynamic set of relationship between social actors that result in variations in the quality of human activity according to Alain Touraine who defined class as something more than just categories.

It can be argued that old age is simply more than matured physical body; it is a social body and a ground of consensus dynamics of power politics. Using Foucault theory of the notion of body and power it is this social body which needs to be taken care of, insured and regularly at the mercy of medical check ups. The hype for insurance, medical checkups, alarming rates of increased life style diseases have made human body very vulnerable and has commoditized it. This has diminished the thin line between a healthy and sick body. Old age or deteriorating body is seen as a disease and an onset of a helplessness psychology being facilitated with pseudo therapeutic devices of a comfortable stress free life at home amidst the loved one through economic disengagement.

Social Security Benefits In India For The Poor In The Unorganized Sector

Social security measures, a welfare arrangement of the government to support the elderly who have retired to make way for younger population. In Indian context, the important issue is how to provide old age pension as well as insurance and medical cover to the elderly. Increasing cost of health care system in India, provision for welfare programs and social security measures for the increasing elderly population excerts a tremendous pressure on government as there is low tax collection consequent to declining portion of productive labor force in the age group of 60 years onwards. Henceforth, this creation of "seniority rents" (Charan Singh, 2013) of the unproductive ages which gets created by the retirement of the older workers has economic pressure on government.

India has a low social security base because of which people work as long as possible to support themselves. It is even more precarious for elderly people working in the informal sector. For them there are hardly any significant benefits.

Constitutional Provisions and Legal Support System for the Aged in India

In Constitution of India, the Concurrent List, Directive Principles of State Policy relates to old age pension, social security and social insurance, and economic and social planning and social security. Other policy such as the National Policy on Older Persons, 1999, The Maintenance and Welfare of Parents and Senior Citizens Bill, 2007 exist for the benefit of elderly but lack of awareness have made these laws futile. Section 125(I) (d) of the Code of Criminal Procedure 1973, and section 20 (3) of the Hindu Adaptation and Maintenance Act, 1956 recognize the right of parents and duty of children to support them who are without any means.

Suggestions and Conclusion

Adam Smith and Karl Marx emphasized the functioning and capabilities to function as determinants of well being and Aristotle's "life is the sense of activity" talks about the quality of life and the ability to achieve these activities is the ultimate success of human life.

According to Amartya Sen, development is the capability expansion and this has to be followed in aspects of poverty alleviation, progress and planning. The capability of the person to achieve the functioning has to be valued. Functioning is an achievement of a person what he or she manages to do or to be and any such functioning (doing and being) reflects as it were a part of the state of that person. Capability approach is freedom in doing and being. (Sen Amartya, 1981)

Combination of social and economic processes through economic disengagement leads to inequality among elderly across class and gender leading to forceful ageing. There are frequent occasions of disastrous denials for them in terms of basic needs. This has been recognized and attempts have been made to change the structuring of society towards abolition of biases based on age. Anti age discrimination laws in 1960s in USA to improve the safety and effective conduct and improving worker efficiency is a glaring example of the movement for an abolition of age biasness in productive sphere.

Similarly the national development plans and poverty reduction strategies should be so designed to accommodate the new generation of older people who are educated and skilled. Ageing population can be made part of the main stream culture by managing the social, economic, cultural challenges in families, society, global communities. Health is now much less important as a consideration for the decision to retirement as it was before some years ago as improvement in technology has made jobs relatively easier.

Sustainability of pension fund and the social security should be made stronger by floating various lucrative governmental schemes along with strengthening the already existing ones and making people aware of them during their early period of employment. This would ensure a monthly income without a burden of government after retirement. If a later retirement age makes the entry of young officials difficult then the older population can be involved in training for the young staff or partly engaged. Overall, the retirement age should be extended to 68 years looking at the health care facility and the type of work people are engaged in keeping aside the unorganized sector. This extension of service period holds even more importance as because of increase in education and employment opportunities for women in

comparison to a few years back, the trend is towards late marriage and late pregnancy. This means at this age of retirement the children are still continuing their education and not settled in life as it used to happen early. So the family responsibility still continues till later stage of life, thus a later retirement age would not only ensure a continuity in their productive age and a chance to render their services for a longer period of time but also adopt to the new structuring of the institution of marriage and family.

Safety nets contributing to the postponement of economic disability and prevention of socially imposed inability in various aspects at the later stage of life through effective prevention strategies and stronger legislations that identifies the gap and protect their human rights should be integrated in the development programmes. Neglect and violence against older persons can be avoided by providing enabling and supportive measures or environments for a socially and economically active, secured and healthy ageing population to contribute efficiently as important member of the society.

Life long ageing process does not start at 60 or 62 where the socially imposed disability is imposed. To age with dignity and security, enjoying life through the full realization of all human rights and fundamental freedom should the core principle of the government. Forceful ageing by making one old, incapable and with limited choice, lack of alternative employment opportunities for senior citizens and other age related discrimination yearns for new approaches when societies, workforce and social intergenerational relations can be structured and the integration of aged within the larger processes of development globally to maximize the use of demographic dividend which our country is passing through becomes feasible.

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Indian Journal of Gerontology
2017, Vol. 31, No. 3, pp. 355–364

Aerial View of Alzheimer's Disease

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ABSTRACT

Alzheimer's disease is a neurodegenrative disorder which has been playing the role of 'the angel of slow death' for more than a century. From the year 1906 when this disease had first been described, till this day, much research has been undertaken to find a cure for this disease. So far, after more than a century's work, research field has reached a milestone in finding the pathophysiology, disease mechanism and diagnosis of this disease, but, no head way has been made as yet in finding a cure for this disease. Hence, as short gap remedy, symptomatic treatment has been hired to help the patients. But, the sun hasn't risen as yet in the territory of Alzheimer's cure. This review paper gives a brief idea of the progress made in Alzheimer's research so far and would like to argue that the only successful therapy that could ease the disease and brighten the course of life is palliative care.

Key words: Alzheimer's disease (AD), Possible causes of AD, General symptoms of AD, Available symptomatic treatment for AD, Palliative care.

After about 10 years of marriage, in the year 2001, Michael was diagnosed with Young Onset Alzheimer's Disease at the age of 36. He had an inherited form of the disease – Early Onset Familial

Alzheimer's Disease (EOFAD) and had already lost his mother and brother to the disease. As a father of two small children of about 7 and 9 year old at the time of his diagnosis, it was tough for his wife and children to see him decline rapidly. Since his diagnosis, he had been hospitalized for anger management, dehydration, emergency gall bladder surgery, a collapsed lung, seizures, and pulmonary embolisms. Despite these ailments, he survived for 11 years and later died in 2012. His children saw their father, a man who had given them piggy back rides, rode bikes with them, taught them many things and played games with them deteriorate in front of their eyes (Karen Henley, 2011). Unlike other diseases, which when detected early can help in the treatment and cure, Alzheimer's, doesn't have any such cure. On the other hand, after the onset of Alzheimer's, the patient usually lives at the cliff hanger of life. Life goes from an active and energetic end to monotonous and rhythmic end.

This paper basically dwells on the meaning of Alzheimer's Disease (AD), the possible causes of AD, general symptoms of AD, available symptomatic treatment for AD and a possible way forward for this disease.

Meaning of Alzheimer Disease

Dementia is a clinical syndrome characterized by a cluster of symptoms and signs manifested by difficulties in memory, disturbances in language, psychological and psychiatric changes and impairments in activities of daily living (Burns and Lliffe, 2009). In a sense Dementia is common in old adults, but, it is not an inherent part of aging.[3]

Alzheimer's is one of the most common forms of dementia that is generally seen in the aged population. Alzheimer's is also known as

Senile Dementia of the Alzheimer Type (SDAT) and is an incurable, degenerative and terminal disease which was first described by a German psychiatrist and neuropathologist, Alois Alzheimer in 1906 and the disease was later named after him (Gautrin, *et al.*, 1990). Alzheimer's disease is a disease that affects about 10 per cent of the population aged over 65 years and its susceptibility increases with increase in age.

According to the World Alzheimer's Report (2015), there are about 9.9 million new cases of dementia with about 46.8 million people worldwide already living with dementia. Also, it has been stated that Asia alone houses 22.9 million people suffering with dementia. The number of dementia cases is expected to double in the next 20 years, with the rate of discovery of 1 new dementia patient every 3 seconds. It is also predicted that the number of people suffering from dementia is said to rise to about 74.7 million by 2030 and 131.5 million by 2050. Furthermore, it has been stated that the total estimated worldwide cost for treatment of dementia is US$ 818 billion. By 2018, it is expected to become a trillion dollar disease, rising to US$ 2 trillion by 2030. The World Health Organization (WHO) has taken many initiatives and steps in creating action plans for stalling and bringing a solution for dementia (ARDSI, 2010). In spite of all these efforts, sadly, so far no cure has been found as yet for Alzheimer's Disease and therefore, it is time for all the countries in the world, both the developed and the developing countries, to stand united in funding researches on AD and bringing some effective solution for this neurodegerative disorder which is not only rotting the frail old age of millions of humans but is also drilling a hole in the finance of every nation.

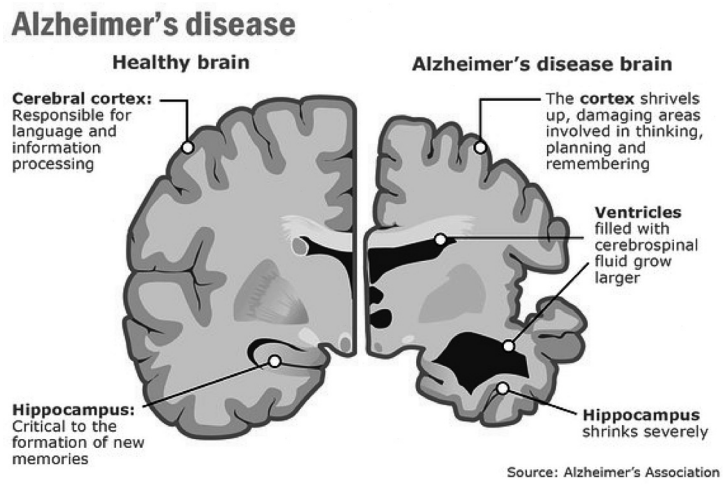
Possible Causes for Alzheimer's Disease

After much earnest and diligent research on AD, scientists across the globe have identified some of the possible causes for Alzheimer's disease which we would like to place below:

- Advancing in age
  - Chances are doubled every 5 years between 65–95 years
  - Chances increases from 2 per cent at 65 years to 40 per cent at over 85 years.

- Family History –
  - threefold to fourfold higher risk among individuals having first degree relative with AD
  - nearly eight fold higher risk among individuals having 2 or more first degree relatives with AD
- Mutation of Chromosome 1, 14, and 21
  - Causes rare early onset (between 30–60 years) of Alzheimer's commonly known as familial Alzheimer's disease
  - Sometimes it can be inherited in autosomal dominant manner with genetic mutations in chromosome 1, 14, and 21 resulting in formation of abnormal/mutated precursor protein, presinilin 1 and presinilin 2
- Genetic factors – 'risk gene' or the gene that encodes apolopoprotein E4 (ApoE) on Chromosome 19 (Howard Crystal, 2015)
  - Causes late onset of Alzheimer
  - People with one copy of ApoE4 gene have about 2–3 fold increase risk of AD while people with two copies of ApoE4 gene have about 9 fold increased risk of AD. But, at the same time, every person with two copies of ApoE4 gene, doesn't always get AD.
  - ApoE4 patients have been demonstrated to make poor recovery from head trauma. So greater manifestation of trauma may be pseudo marker for ApoE4 inheritance which could be a risk factor of AD
- Also, diabetes mellitus, insulin resistance, high cholesterol, hypertension, reduced exercise and obesity could be risk factors for AD (ibid)
- Reduction in the synthesis of neurotransmitters – acetylcholine, is the main cause of AD. This could lead to cholinergic effects like initiation of large scale aggregation of amyloid, in turn leading to generalized neuroinflammation.

Figure



Apart from the above mentioned causes, other probable causes like obesity, diabetes, high blood pressure, and high cholesterol can also play an active role in triggering Alzheimer's Disease (NIA & NIH, 2011)). After the trigger of Alzheimer's disease, the patient's health deteriorates in a predictable pattern. This deterioration follows 3 different stages and those stages are listed below:

1. *Early Stage:* It is also known as the mild or early stage. Here, the patient suffers from frequent recent memory loss, personality changes with functional decline. Also, the patients can have problem with expressing and understanding language, difficulty in writing and using object, and depression with apathy.
2. *Mild-Moderate Stage:* The patient suffers from pervasive and persistent memory loss, loss of familiar settings, sleep disturbances, mobility and coordination problem, and mood or behavioral symptom accelerate. About 80 per cent of patients at this stage suffer from emotional and behavioral problems which are aggravated by stress and changes. Assistance is required for daily life as the part of the brain required for language control, reasoning, sensory processing and conscious thoughts is damaged.

3. *Severe Stage:* The patient has confusion about the past and present, total loss of verbal skills, extreme mood swings, behavioral problem, hallucination and delirium. Total care is required and generally, the patients die due to infection of pneumonia.

Symptoms and Neuropathology of AD

Some of the symptoms that accompany AD are like – amnesia, aphasia, apraxia, agnosia, executive dysfunction, visuospatial dysfunction and many more.

At the cellular level, AD is characterized by a progressive loss of cortical neurons, especially pyramidal cells, which mediate higher cognitive functions (Norfray, J.F. *et al*., 2004). The main consistent feature of AD is the loss of larger neurons present in the superficial cortex of the brain. This causes synaptic alterations such as reduction of pre-synaptic terminal density. AD begins in the medial temporal lobe, specifically in the entorhinal cortex and progresses on to the hippocampus (Igor, 2014) and later to the posterior temporal and parietal neocortex (Preston and Eichenbaum, 2013). This causes diffuse degeneration throughout the cerebral cortex. AD is characterized by diffused atrophy of central cortex, reflecting loss and shrinkage of neurons with resulting enlargement of ventricles. The hippocampus is damaged and atrophied in AD even at the earliest stage of the disease. Identical features of AD is said to be – amyloid plaques and neurofibrillary tangles (NFTs).

An eminent pharmacologist at University of Bristol, Professor Peter Roberts said, "Amyloid deposits begin maybe 20 years before the onset of Alzheimer's Disease". But, he also said, "No convincing evidence shows a clear relationship between amyloid deposition and deficits in cognition in humans".

The cholinergic hypothesis of AD concludes that cholinergic systems in the basal forebrain are affected early in the disease progression leading to loss of acetylcholine neurons, loss of enzymatic function for acetylcholine synthesis and degradation, resulting in memory loss and deterioration of other cognitive and non-cognitive functions such as neuropsychiatric symptoms (Salawu, F.K. *et al*., 2011).

The amyloid hypothesis ascribes a causative role in AD to abnormal amyloid processing and deposits and this is one of the optimistic models regarding the cause of AD. As AD progresses, glutaminergic, noradrenergic and serotonergic system deficiencies develop and are probably associated with further cognitive deterioration and behavioral abnormalities (Fergus Walsh, 2016).

It should be noted that Neurotransmitter acetylcholine (Ach) is a very important chemical messenger required for memory and learning, and loss of cholinergic neurons may underlie memory loss in AD. The Acetylcholinesterase (AchE) inhibitors reduce the enzymatic degradation of neurotransmitter Ach, which is deficient in the AD brain and in this way enhances the cholinergic system. The cholinesterase inhibitor prevents breakdown of acetylcholine in the brain. Latest research on AD found that the level of acetylcholine is low in the brain of AD patients.

Treatment for AD

Some acetylcholinesterase (AchE) inhibitor drugs like Donepezil, Galantamine and Rivastigmine are so far said to be one of the most effective medications of AD and has been approved by the United States Food and Drug Administration for the treatment of AD. These drugs have demonstrated to improve cognition, function of ADL and behavior in patients with AD. Is has been said to be most effective among early AD patients in terms of symptomatic control and delay of its long term adverse effects (Konstantina and Sokratis, 2013).

Another drug known as Memantine which doesn't contain any cholinesterase inhibitor but rather is an N-methyl-d-aspartate (NMDA) receptor antagonist can be used in the treatment of AD. Incidentally, it is the first drug approved for the treatment of moderate to severe AD. It basically functions by antagonizing glutamate at NMDA receptor and potentially improving the signal transmission and also prevents the excess calcium rush into neurons with glutamate stimulation, thereby protecting against toxic damage to cholinergic neurons (Ibid).

Apart from these available drugs for AD treatment, there is another drug, Solanezumab, which was thought to be the potential drug to treat AD was discovered but recently it was failed in the drug

trial test. This drug successfully broke down the sticky plaques of amyloid but the debris formed after break down of plaques couldn't be drained off through the normal fluid drainage pathway of the brain and hence the accumulation of debris of plaque remained in the brain (Pouryamout, L. *et al*., 2012).

Neuroprotective strategies can also be used in the treatment of AD and that can be done by using antioxidants like α-tocopherol (Vitamin-E) and selegiline, but, the trial results have so far been equivocal.

Treatment of Alzheimer's disease doesn't stop the underlying decline and death of the brain cells. Therefore, as AD progresses, more neuronal brain cells die. This death of the brain cells is currently unstoppable. Also currently no therapy has been proved to delay biological progression of the disease, thus there is a great need for further research in this field.

A Way Forward

Since most of the drugs that are used so far are either symptomatic drugs or antipsychotic drugs, the underlying disease is yet to be treated and cured. The only successful therapy that could ease the disease and brighten the course of turn in life is *palliative care*. The care givers should treat the patient with more patience and tolerance as these are the two most important ingredients required when the patient progresses to the stage of severe AD. After all the saying rightly goes: "Do unto others as you want to be done to you". No one is immune to this disease and technically, as life progresses; the dice is in the Maker's hand wherein our fate of being a victim for this fateful disease is decided. Therefore, the need of the hour is to have more investment for research on AD and also collaborative research on AD between institutes of India and China in Asia with the institutes and the universities in the United States and in Europe. The earlier more investment and creative environment is made for research on AD, the better result we may show to the world to contain AD.

In the United States and in many other European countries, particularly organizations such as Alzheimer's Disease Cooperative Study (ADCS), National Alzheimer's Coordinating Center (NACC), Alzheimer's Association, and many other organizations have

undertaken a number of studies and researchers in order to find respite from this booming disease which has no cure so far. On the other hand, in countries like China, India and some other Asian countries, which constitute the highest number of dementia cases in the world, not much study or research, have been done so far. Hence, it is up to the Government organizations like National Institute of Mental Health and Neurosciences (NIMHANS) and Indian Council of Medical Research (ICMR) in India; and in China, Chinese Academy of Medical Sciences (CAMS) to undertake collaborative research to find an early solution for this disease.

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