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Periodontal Status and Oral Health Related Quality of Life in Rural Elderly Population of Faridabad: A Pilot Study

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ABSTRACT

The elderly population has increased continuously in the last decades all over the world. This poses tremendous challenges to health and social policy planners, particularly because disease patterns will shift concurrently. Periodontal disease, through inflammation and destruction of the periodontium, produces a wide range of clinical signs and symptoms, some of which may have a considerable impact on day to day life or life quality. Thus, a cross-sectional pilot study was conducted among 121 rural elderly subjects of Faridabad to explore the associations between clinical periodontal findings and oral health related quality of life. Data was collected by conducting clinical oral examination and by filling a self-administered questionnaire. Oral health related quality of life was assessed by pretested Hindi version of Geriatric Oral Health Assessment Index (GOHAI-Hi). Periodontal status was assessed using the Community Periodontal Index – CPI and Loss of attachment (WHO, 1997). Tooth mobility was assessed using a modified Miller's index. The mean Add-GOHAI score was 19.4298. The mean number of negative impacts or mean Sc-GOHAI score was 6.3884. Tooth mobility and LOA scores were found to be significantly associated with OHRQoL while CPI scores did not show any correlation with it.

Key Words: Elderly, GOHAI, CPI, Loss of Attachment, Tooth Mobility

The elderly population has increased continuously in the last decades all over the world. According to the World Health Organization (1997), approximately 600 million people are aged 60 years and over, and this number will double by 2025 (Petersen and Yamamoto, 2005). This demographic transition is seen more pronounced in developing countries as compared to developed countries. The size of the elderly population has risen from 12.1 million in 1901 to approximately 77 million in Census 2001. According to official population projections, the grey population which accounted for 6.7 per cent of total population in 1991 is expected to increase its share to more than 10 per cent by the year 2021. About 75 per cent of persons of age 60 and above reside in rural areas (Government of India, June 2011). This poses tremendous challenges to health and social policy planners, particularly because disease patterns will shift concurrently. Loss of independence, cognitive problems, forgetfulness, lack of motivation, physical disability layered with chronic medical problems in them contribute to diminish the self care ability thereby enhancing their susceptibility to oral diseases.

Improvement in oral health is of paramount requirement for improvement in general health. In elderly people, oral health contributes significantly towards quality of life. Poor oral health and loss of teeth not only affect the dietary intake, nutritional status and phonetics but also compromise the general health.

Most of the studies describing the oral health of elderly people are confined to traditional measures of oral diseases and give little insight into how oral health affects the quality of life. How oral disease affects a person's life is as important as the measurement of its prevalence and incidence Therefore, the concept of Oral Health-Related Quality of Life (OHRQoL) is established by some questionnaires, including the Oral Health Impact Profile (OHIP), Oral Impacts on Daily Performance (OIDP) and Geriatric Oral Health Assessment (GOHAI), to assess patient self-perception.

The Geriatric Oral Health Assessment Instrument (GOHAI), aims to complement clinical measures by paying special attention to problems related to physiological, physical and psychological needs

(Atchison and Dolan, 1990). As life expectancy increases worldwide and as the elderly population (older than 60 years) increases, such measures must be taken into account for planning and assuring the quality of life of this segment of population.

For decades, the importance of and need for periodontal care has largely been attributed to the high prevalence of periodontal disease in most societies. Rao *et al.,* (1999) assessed the oral health status in 287 institutionalized residents in Mangalore (India). It was observed that none of the subjects had completely healthy periodontium. According to the National Oral Health Survey (2002–03), over 90 per cent of elderly people in India had some form of periodontal disease.

The impact of periodontal disease on an individual is usually characterised by clinical parameters such as probing depth and attachment level. However, periodontal disease, through inflammation and destruction of the periodontium, produces a wide range of clinical signs and symptoms, some of which may have a considerable impact on day to day life or life quality (Locker, 1988). Little is known about this aspect. Thus, the present pilot study was conducted to determine associations between clinical periodontal findings and oral health related quality of life of rural elderly population of Faridabad.

Methodology

Study Population

A cross-sectional pilot study was conducted among 121 rural elderly subjects of Faridabad to explore the associations between clinical periodontal findings and oral health related quality of life.

Ethical Clearance

Ethical clearance was granted by the Ethical Review Committee of Sudha Rustagi College of Dental Sciences and Research, Faridabad. All the subjects selected were given an information sheet explaining the purpose and procedure of the study. They were requested to go through it and then informed consent was obtained.

Sample Selection

The present pilot study was conducted to assess the feasibility of conducting a large study. In total, 121 elderly subjects were selected from three villages using convenient sampling.

Inclusion Criteria

- Elderly people residing in the rural areas of Faridabad, who were willing to participate were included.

Exclusion Criteria

- Physically challenged and mentally compromised elderly people and those with cognitive impairment were excluded.
- Elderly people with terminal illness were also excluded.

Data Collection

Data was collected by conducting clinical oral examination and by filling a self-administered questionnaire. The questionnaire consists of information regarding socio-demographic data such as age, sex, educational level. Oral health related quality of life was assessed by pre-tested Hindi version of Geriatric Oral Health Assessment Index (GOHAI-Hi). The instrument's psychometric properties, validity and reliability have been assessed and reported to be good.

For each of the 12 items of GOHAI-Hi questionnaire, participants can respond to experience in the last 3 months on a Likert-type scale (0=never; 1=seldom; 2=sometimes; 3=often; 4=always). Two different scores of the GOHAI can be calculated. The additive score (Add-GOHAI-Hi) is a sum score, ranging from 0 to 48 with lesser score indicating a better reported oral health status. The simple count score (Sc-GOHAI) is a count of the items with the responses 'sometimes', 'often' and 'always' and ranges from 0 to 12 (12 indicates poor oral health). The scores for questions 3, 5, 7 were reversed when adding the total score, since these three items were positively worded and rest nine were negatively worded.

The oral examinations were performed at the same time after the participant had filled the questionnaire. All the subjects underwent a full mouth oral examination performed by a single trained, calibrated dentist using sterilized instruments. The oral examination was done under natural light with a dental mirror and CPI periodontal probe. Periodontal status was assessed using the Community Periodontal Index – CPI and Loss of attachment (WHO, 1997). Tooth mobility was assessed using a modified Miller's index (Laster *et al.,* 1975), whereby the ends of two instruments were placed on either sides of the tooth and forces applied in bucco-lingual/palatal direction and scored as 0=no detectable movement; 1=first distinguishable sign of

mobility; 2=crown deviates within 1mm of its normal position; 3=mobility is easily noticeable and the tooth moves more than 1mm in any direction or can be rotated in its socket. Only those teeth which scored > 2 were considered as mobile.

Reproducibility assessed by duplicate clinical examinations of 35 subjects gave kappa values of 0.91 for tooth mobility and kappa values ranging from 0.75 to 0.85 for CPI and LOA scores of index teeth.

Data was analysed using the statistical package SPSS 11.5. Means and standard deviation of dependent variable Add-GOHAI-Hi were calculated. The association between GOHAI-Hi scores and objective assessment of periodontal status (tooth mobility, CPI score and loss of attachment score) was assessed.

Results

Participant Characteristics

A total of 121 participants (69 male, 52 female) participated had filled the questionnaire. The socio-demographic characteristics are shown in Table 1. Maximum participants were in the age group of 60–69 years (n=60, 49.6%). Around 62.8 per cent reported that they had received some form of formal education. The mean GOHAI score for this group (18.3421) was lesser than that of the group with no formal education (21.2667) and the difference was statistically significant (p=0.003). No difference of mean GOHAI score was observed between gender and age groups.

Table 1
Characteristics of Subjects

	N	*%*	*Mean Gohai-Hi Score*	*P Value Test*
GENDER				
Male	69	57	18.7826	0.077 Mann Whitney U test
Female	52	43	20.2885	
AGE				
60–69	60	49.6	18.6000	0.174 Kruskal wallis test
70–79	35	28.9	20.4571	
80 and above	26	21.5	19.9615	
EDUCATION				
No formal education	45	37.2	21.2667	0.003 Mann Whitney U test
Formal education	76	62.8	18.3421	

Responses of Hindi Version of GOHAI

The impact of oral health on the life quality of the subjects was considerable with substantial influence on physical functioning, pain and discomfort and psychosocial concerns (Table 2). The mean Add-GOHAI score was 19.4298 (SD =5.4571; Range of 7–32). The mean number of negative impacts or mean Sc-GOHAI score was 6.3884 (SD = 2.4130; Range of 1–12).

Table 2

Item Responses And Gohai-Hi Scores

	Gohai Items	*Never (0)*	*Seldom (1)*	*Sometimes (2)*	*Often (3)*	*Alway s (4)*	*Mean Gohai-Hi Score*
1.	Limit the kinds of food	3 (2.5)	16 (13.2)	52 (43.0)	43 (35.5)	7 (5.8)	2.2893
2.	Trouble biting or chewing	1 (0.8)	6 (5)	36 (29.8)	61 (50.4)	17 (14)	2.719
3.	Ability to swallow comfortably	5 (4.1)	6 (5)	37 (30.6)	67 (55.4)	6 (5)	1.4793
4.	Problems to speak clearly	17 (14)	35 (28.9)	66 (54.5)	3 (2.5)	-	1.4545
5.	Ability to eat any kind of food without discomfort	3 (2.5)	28 (23.1)	44 (36.4)	39 (32.2)	7 (5.8)	1.843
6.	Limit contact with people	27 (22.3)	67 (55.4)	24 (19.8)	2 (1.7)	1 (0.8)	1.0331
7.	Pleased with look of teeth	3 (2.5)	7 (5.8)	59 (48.8)	43 (35.5)	9 (7.4)	2.3967
8.	Used medication to relieve pain	60 (49.6)	36 (29.8)	18 (14.9)	6 (5.0)	1 (0.8)	0.7769
9.	Worried about teeth, gums or dentures	6 (5)	42 (30.7)	54 (44.6)	19 (15.7)	-	1.7107
10.	Self conscious of teeth, gums or dentures	46 (38)	55 (45.5)	14 (11.6)	6 (5)	-	0.8347
11.	Uncomfortable eating in front of others	30 (24.8)	66 (54.5)	20 (16.5)	2 (1.7)	3 (2.5)	1.0248
12.	Sensitive to hot, cold or sweet foods	27 (22.3)	10 (8.3)	44 (36.4)	32 (26.4)	8 (6.6)	1.8678

Mean Add-GOHAI-Hi score was 19.4298; SD–5.4571; Range of 7–32.

Mean SC-GOHAI-Hi score was 6.3884; SD–2.4130; Range of 1–12.

Majority of the respondents reported one or more functional problems. As high as 91.3 per cent stated that they had limited (sometimes, often and always) the kind of food they ate (Q1). Similarly, 94.2 per cent (sometimes, often and always) indicated trouble while biting or chewing food (Q2). 60.4 per cent (never or seldom) reported no or very little problems in swallowing (Q3) while 57 per cent (sometimes and always) had problems in speaking clearly (Q4).

Higher number of the respondents (59.5%, sometimes and often) reported some kind of pain or discomfort when eating any kind of food (Q5) although lesser participants (20.7%, sometimes, often and always) had reported the use of medication (Q8) for the same. A high of 69.4 per cent (sometimes, often and always) reported to feel sensitivity in their teeth or gums while consuming hot, cold or sweet foods (Q12).

Association of Mean GOHAI Scores with Clinical Variables

Mean number of mobile teeth in subjects with at least one natural tooth (n = 87) was 4.1928. Among these 87 subjects, most are partially edentulous. Thus, mean GOHAI scores of the subjects were compared according to the proportion of mobile teeth, i.e., the mean GOHAI score of those subjects in which mobility was present in less than 50 per cent of teeth present was compared with mean-GOHAI of those subjects in which mobility was present in more than 50 per cent of teeth present. A statistically high significant difference was found between the two means (Table 3). Out of 77 subjects who were eligible for recording of CPI and loss of attachment, 52 per cent were having highest CPI score for shallow pockets and 49.4 per cent were having loss of attachment of 6–8mm. Mean-GOHAI score did not show any correlation with CPI scores but a statistical significant difference in mean-GOHAI scores was found between the subjects showing different levels of loss of attachment. Subjects having higher loss of attachment showed higher GOHAI scores thus indicating poorer oral health related quality of life.

Table 3
dAssociation of Mean GOHAI-Hi Scores with CPI, LOA Scores and Tooth Mobility

	Mean Add-Gohai-Hi Scores	*Test*	*Significance*
Proportion of mobile teeth (subjects with at least 1 natural tooth = 87)			
< 50% of total teeth present (n = 66)	16.5	t-test	P < 0.005S
> 50% of total teeth present (n = 21)	20.22		
CPI score			
0–2 (n = 17)	21.0588	Kruskal Wallis test	p = 0.167NS
3 (n = 46)	19.347		
4 (n = 14)	17.5714		
LOA score			
0 (n = 2)	14	Kruskal Wallis test	p = 0.001S
1 (n = 10)	15.7		
2 (n = 43)	18.88		
3 (n = 22)	22.59		

Discussion

Understanding the consequences of oral ill health from the patient's perspective has emerged as an important research field (Buck and Newton, 2001). This lead to an increase in the use of patient-centered oral health status measures, predominately seeking to measure the impact of oral health on quality of life (Birch and Ismail, 2002). This article reported upon the prevalence of tooth mobility, CPI and LOA scores and their association with GOHAI scores in a rural elderly population of Faridabad.

Most measures of health related quality of life are developed in English language and are intended for use in English speaking countries (Guillemin *et al.*, 1993). It is therefore important to develop measures specifically designed for use in other non-English speaking populations, like elderly rural Indian population, since cultural groups differ in disease expression and in use of various health care systems.

Thus, the original GOHAI was translated in local Hindi language and tested for its psychometric properties for use in rural Indian population. Standardized translation process was used to ensure the accuracy of the questions which resulted in the formation of a Hindi version. The Hindi version of GOHAI was found to be reliable for use in Indian rural population.

On examining socio-demographic characteristics, level of education was found to be a significant variable affecting OHRQoL. This finding is in agreement with other studies conducted in the past (Atchison *et al.*, 1990; Tubert-Jeannin *et al.*, 2003; Naito *et al.*, 2006).

In the present study, we found a significant correlation of proportion of mobile teeth with mean-GOHAI scores. Though few studies are focused on tooth mobility and its impact on quality of life, a study conducted by Wan-Nasir *et al.* (2006) which depicted similar relationship This could be explained by the fact that mobile teeth not only causes pain and discomfort but also interferes with the oral functions thus affecting the oral health related quality of life negatively.

There was no significant association between CPI scores and GOHAI scores. This is in agreement with a study conducted by Wong *et al.*, (2002). On the other hand, a highly statistical significant association was found between loss of attachment scores and GOHAI scores. Subjects with greater loss of attachment reported poor oral health related quality of life. This contradiction between CPI scores and LOA scores probably could be explained by the fact that a large number of subjects were present with the findings of gingival recession. Findings related to loss of attachment scores and GOHAI were not comparable as the researches did not find any study where LOA scores were correlated with oral health related quality of life.

Conclusion

The present cross-sectional pilot study was aimed to determine the association between the tooth mobility, CPI scores and the LOA scores with the oral health related quality of life measured by GOHAI in rural elderly population of Faridabad. This study identified tooth mobility and LOA scores as risk indicators of compromised

OHRQoL while CPI scores did not show any correlation with it. Further large scale studies are required to confirm this relationship. Rural geriatric population is a special need group for dental care. But this 'special-ness' lies more in their inability to access dental care rather than some particular feature of their oral or general health The findings of the present study point to a need to improve access to oral health care for rural elderly population.

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Healthcare Seeking Behaviour of Elderly Women in Mumbai Megapolis

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ABSTRACT

This article is based on a study of 306 elderly women in Mumbai megapolis. The mandate of the larger study was to understand health status, healthcare seeking behaviour, care arenas and overall sense of health and well-being based on select indicators. This article focuses particularly on the healthcare seeking behaviour component of elderly women as also arenas of care and correspondingly social networks which could be domains of care. The larger methodological paradigm is quantitative with some qualitative data. Results proposed that in terms of curative health care, a majority resorted to private hospitals. Some prevalence was also there in terms of alternate therapies and alternate medicine. In terms of preventive health care close to half of the elderly women perceived balanced nutrition to be the core strategy. This was followed by exercise and maintaining social networks as also some degree of spiritualism. The core themes on healthcare strategies as emerging from elderly women's voices were: rhythm and regularity; practiced abstinence; religiosity propelled abstinence; internalising embodied atrophy and seeking parallel control mechanisms; longitudinal care and maintenance; positive psychology lens, i.e., a sense of optimism and gratitude; spiritualism and theism; and, hybridising and combining medicinal approaches. Although family was the main arena of healthcare provision, differentials existed on

varied background characteristics. To assess the nature of social networks among elderly women a Likert type scale called the Lubben Social Network Scale–18 (LSNS–18) was used. In general as per the score ranges, social networks were of fair and good nature with the general propensity to rely on them in times of need. Predictable differences existed in terms of background characteristics; older, widowed, never employed women as also women residing alone and in institutions having poorer social networks.

Key Words: Elderly Women, Health, Healthcare Seeking Behaviour, Care Arenas

The dimension of healthcare seeking behaviour is an intermediary step to ensure well-being among older women. There are models in terms of curative-preventive, traditional-indigenous, public-private and within each, aspects of socio-economic differentials reveal the complexity in terms of access and utility. The curative-preventive model is the medical positivist approach and the indigenous/traditional-western model is the social construction approach (Bond and Cabero, 2007). The curative-preventive model examines two dimensions of healthcare – the curative which is health seeking behaviour post onset/incidence of ailment and the preventive which is a precautionary measure. Therapy is also a part of curative model including – psychotherapy, physiotherapy and alternate therapies such as music therapy. The range of options available within each depend on the social, economic, cultural, political and environmental factors prevailing in a society at a given point of time. The model is medical-positivist because its operation takes into account understandings from biological sciences and is generally geared towards one common goal – that of well being. The indigenous/traditional-western model of healthcare seeking behaviour examines two dimensions – the indigenous/traditional forms of medicine and the western/(allopathy) forms. The two aspects of the model also signify two ends of the continuum in terms of extent of modernisation/scientism of societies. The model is social constructivist because it reflects the health beliefs (or dominant ideals and systems) of particular cultures and societies. In

both the above models, the political economy and social stratification play a key role (Bond, *et al.*, 2007).

The contemporary urban scenario in the Indian context has witnessed the growth of megapolis cities with a diverse population along with a growing trend of elderly population – Mumbai being a prime example of the same. The Mumbai megapolis (island city and suburbs) has a diverse population of elderly women (diversity in terms of social, economic, cultural and demographic factors) and an equally diverse healthcare system comprising of public (municipal), private services and alternate therapeutic services and systems like ayurveda, homeopathy and naturopathy.

Indian literature in the 80s has focused on health issues of the elderly with gender as one category of analysis. The latter studies have focused exclusively on morbidity/mortality issues of older women and widows in particular. Significant studies herein are by Gulati (1991, 1998), Chen and Dreze (1992) and MariBhat (1998). The last decade has seen a spate of studies on elderly women and various aspects of their well-being building on the fact that elderly women in India face a range of psychological and social issues (Uma Devi, 2005). Most of the studies have focused on outlining the demographic profile of elderly women in various regional contexts and unearthing the differentials in terms of prominent background characteristics. Kakoli and Chaudhuri (2008) have looked at healthcare utilisation and gender differentials therein. Advanced analysis of NSSO and census data on elderly and health issues in particular with a focus on gender differentials has also been undertaken. Studies on demographic profiling have examined health as a crucial indicator outlining types of ailments, healthcare dimensions and own perceptions of health and well-being. Three such studies by Panda (2005), Pandya and Shah (2006) and Shah and Joshi (2006) have been based on elderly women in urban areas of Delhi and Gujarat (Baroda city). Ghosh and Dey's (2006) study is on depression levels among older widows and widowers of Kolkata. These have looked at all aspects of elderly women's lives and one on psychological health in particular.

Few other studies have also examined aspects of nutritional levels, anthropometric data, gender differentials in access and attainment of health (district level data), issues of roles in production and work, sense of security issues, analysis of macro level data such as that of NSSO to look at health issues of older women and institutionalised elderly as well as few qualitative studies on widowhood experiences and surveys of age-gender specific health issues such as osteoporosis (Devi Dayabati and Bagga, 2006; Jamuna, Umadevi and Ramamurti, 2006; Swarnalatha (2008); Chadha *et al.*, 2008). In particular Rajan (2006) comprehensive analysis of data from NFHS–2, 2001 census and NSS 52nd round has thrown light on illness and hospitalisation details of population ageing in India. Further the extent of utilization of health services by elderly as an index of access and affordability of households has been highlighted along with a need to seriously examine gender differentials therein. Wadley (2008) has, through an ethnographic study of women in all age groups (including elderly women) in the Karimpur district of Western UP (field work from 1967–2008) stated that elderly women's health has taken a backseat in a gender system that operates within a hierarchical caste and class system. However frequent interactions with the urban community has led to better awareness of biomedicine and improved general health, but discrimination still persists. The range of options for medical care available to older women include: traditional knowledge system to allopathic to herbal and ayurvedic cures.

A more nuanced understanding on diversities in the urban areas of healthcare access, attainment and utilisation behaviour of elderly women is nevertheless required for policy formulations. The twin objectives of the paper are to examine curative and preventive healthcare seeking behaviour of elderly women in Mumbai megapolis and corresponding arenas of care. Social networks of elderly women which reveal further gradations of care obtaining arenas of elderly women has also been studied through a specific scale measure.

Methodology

The study has largely aligned to the quantitative paradigm and the survey with some qualitative data on perceived importance of

health and healthcare/maintenance strategies as defined by elderly women.

Sampling Design

The universe being all elderly women in the city of Mumbai, the sampling universe was narrowed down to elderly women having senior citizen identity cards issued by the Government of Maharashtra under the Sanjay Gandhi Yojana. As these are issued in Mumbai primarily through NGOs who act as liaisoning agents between the state department and the elderly community, such NGOs were contacted for the purpose of obtaining initial lists. Four agencies were identified out of which two agreed to provide lists of the cards issued in the past two years, as archives according to the officials were confidential and hence not accessible. However it was also assured that the lists did not only contain young old women, as the scheme being few years old, several old-old and oldest old women also had applied for the cards or were encouraged to apply through the outreach endeavours The coverage was cross sectional and covered island city and suburbs and the lists had some basic details including contact addresses. The sampling universe then comprised of 1063 elderly women across the island city and suburbs. After a round of telephone contacts with the help of a senior citizen's association members, the list was finally cleaned up to have 1033 appropriate contacts (i.e., women who were available at the given addresses and had not changed residence). Of the given number finally 306 elderly women agreed to be respondents for the study[1].

Tools for Data Collection

Data was collected through a structured interview schedule comprising of questions pertaining to background characteristics, health status, own perception (self rated perception) of health, healthcare seeking behaviour and care arenas. To understand social networks in particular, the Lubben Social Network Scale–18 (LSNS–18) was utilised. Lubben Social Network Scale–18 developed by Lubben and Gironda (2003) is an 18 item Likert type scale assessing existing social networks in terms of family, neighbours and friends. The LSNS–18 score is an equally weighted sum of the 18 items and the score range is 0 to 90, with lower score denoting lower social

networks. The scale was cross-checked in terms of permissibility of utilisation as well as cultural relevance/adaptability and a pretesting was done with few members of a senior citizen's association for validity and reliability. The schedule was translated in Hindi and Gujarati and in cases where the respondents could not understand either of the languages; the closest caregiver's assistance was obtained in interpreting the same. Also in cases of respondents with hearing impairment and cases of dementia/Alzheimer's disease, the primary caregiver's assistance was taken for the schedule[2].

Analysis Design

Data has been analysed largely using descriptive statistics and cross tabulations, combining thereby bivariate and univariate forms of data representation and analysis. The open ended question on the importance of health and description of measures taken to remain healthy has been suitably coded for emergent themes.

Background Characteristics and Basic Health Related Profiling

- The general profile of the respondents is a follows. In terms of age, 40.19 per cent were young old, i.e., in the age range 60–69 years, around one-third were old-old, i.e., in the age range 70 to 79 years and 26.79 per cent were oldest old, i.e., 80 years and above. Around six per cent of the respondents were slum dwellers, the rest resided in island city and suburbs in various types of residence arrangements such as MHADA flats, rented apartments and small privately owned flats. A certain small per cent resided in large flats and bungalows in upmarket localities. In terms of marital status, 40.52 per cent of the respondents were widowed and 31.37 per cent were currently married. Around 15 per cent were never married/single and 13.07 per cent were divorced or separated. Majority, 42.81 per cent, of the respondents were Hindu and 15. 36 per cent of the respondents were Muslims. Jain respondents comprised of 13.39 per cent of the sample and 10.46 per cent were Sikh and Parsi respondents respectively. Roughly four per cent of the respondents were Protestant, Buddhist and Jewish respectively. Majority, of the respondents belonged to the general category. Being in Mumbai, one third of the respondents were Marathi speaking (had Marathi as their mother tongue) and

32.03 per cent were Gujarati speaking. In terms of education, majority had graduate level qualifications and few had postgraduate and above qualifications. Work-wise, majority were retired roughly one-third were home-makers. Around 15.69 per cent of the respondents claimed full economic independence and majority were dependent on spouse, children, extended family and institutions. Majority were in high monthly per capita expenditure brackets. One-third were living alone and the rest with families and a small per cent resided in institutions. More than half of the respondents perceived their nutrition levels to be average and 40.52 per cent thought it to be good and very good. A small number, viewed it as poor. In terms of sources of health expenditure, majority relied on spouse as the main source and few on their own savings and extended family. Only 13.73 per cent had a health insurance/Mediclaim policy in their first name.

- The most pertinent types of ailments were: osteoporosis and osteoarthritis; diabetes mellitus; eye ailments (weakening eyesight, cataract, glaucoma); and, cardiovascular diseases including hypertension. Others included depression, dementia as reported by primary caregiver, asthma, Parkinson's' disease and postmenopausal disorders such as infections and discharges. Communicable diseases such as TB, gastrointestinal disorders and others were experienced by very few respondents. Hence this in all confirms that thesis that in the urban areas the trend is more towards lifestyle diseases and age related atrophy such as osteoporosis and osteoarthritis rather than communicable diseases. Further issues of mental health such as depression are also gaining cognisance as critical health issues among elderly respondents with issues of loneliness, spousal death, empty nest syndrome all impinging on the same.
- Osteoporosis and Osteoarthritis and eye ailments were higher among women in the age group 70–79, i.e., the old-old women. Diabetes was higher among the young old and depression, cardiovascular ailments and hearing ailments were higher among the oldest old. Slum dwelling women had higher instances of osteoarthritis and eye ailments. Currently married women had comparatively lesser instances of ailments than widowed,

divorced and never married women. One-third Hindu and Christian elderly women and one-fourth Muslim elderly women had osteoarthritis. Cardiovascular diseases were higher among Parsi women and depression was at a higher instance among Christian elderly women. Generally women with graduate level qualifications had better health than their lesser educated counterparts. However depression levels (self reported) were higher among more qualified older women probably because of cognitive abilities being higher, the capacity to introspect and ruminate of critical life events caused dejection and pathos. Similarly retired women had higher levels of depression as well as a comparatively higher instance of osteoarthritis, ENT ailments and diabetes. Women who were engaged part time in some work had comparatively fewer ailments/health issues thereby proving the efficacy of activity-engagement thesis in old age. Depression levels were higher among women living alone and elderly women living with spouse or with spouse and children had more tangible illnesses and lifestyle diseases such as ENT ailments and diabetes. Elderly women living in institutions had osteoarthritis and ENT ailments to a fair degree as also cardiovascular diseases including hypertension. In terms of nutrition levels, elderly women with average nutrition levels had higher instance of osteoarthritis and diabetes. Women at two ends of the continuum – with very poor nutrition levels and with very good nutrition levels experienced cardiovascular ailments. But women with superior nutrition levels had lower instances of osteoarthritis.

- In terms of physical mobility, close to half of the respondents were fully mobile (49.67%), 27.12 per cent of the respondents were fairly mobile, 17.32 per cent were partially mobile and 5.88 per cent were confined to bed. Mobility declined with age, fewer widows were fully mobile; women who took efforts to remain active and retain good nutrition levels were fully mobile.
- Majority perceived themselves to be mentally active and agile; 31.70 per cent perceived themselves to be partially active and primary caregivers of 2.94 per cent of the respondent that they were inactive. Mental agility declined with age, currently married women vis-à-vis widows were mentally agile; mental inactivity

was higher among Parsi elderly women; women with higher level of educational qualifications were more mentally agile compared to their lesser educated counterparts. Inactivity increased among retired older women, women residing in institutions and with extended family and among women with poor nutrition levels.

- In terms of hospitalisation history, majority did not undergo hospitalisation in the last two years. Among those who did a majority were for bypass surgeries and other cardiac procedures, hysterectomy, knee replacement surgeries and hip fracture related surgeries. Hence among those hospitalised, majority were due to geriatric ailments and health issues.
- Majority of the elderly women perceived their health to be either average or good. Positive self perceptions about health were more prevalent among the young old; currently married elderly women vis-à-vis their widowed and single counterparts. A higher per cent of Parsi elderly women had poor self perceptions of health; a higher per cent of the Muslim elderly women had good self perceptions. Higher education levels and in-service and part-time engaged women had better self perceptions. Institutionalised women and women living alone as also women with poor nutrition levels had diminished self perceptions of health.

Healthcare Seeking Behaviour, Arenas of Care and Social Networks

Curative Healthcare Seeking Behaviour

Elderly women respondents were asked in terms of the most naturally frequented curative healthcare option in the event of a health issue or ailment. Table 1 represents the curative healthcare options. A majority, around 57.52 per cent resorted to private hospitals and clinics; and, around 22.87 per cent went to municipal hospitals and dispensaries. Some prevalence was also there in terms of alternate therapies and alternate medicine – around 8.17 per cent were aligned to ayurvedic treatments, approximately 5.88 per cent took homeopathic cure ailments; and 2.84 per cent resorted to naturopathy. Around 2.61 per cent also resorted to other alternate therapies such as water therapy and acupressure.

Table 1
Curative Healthcare Seeking Option

Curative Healthcare Seeking Option	*Frequency*	*Percentage*
Public/Municipal Hospital/Dispensary	70	22.87
Private Hospital/Clinic	176	57.52
Ayurveda	25	08.17
Homeopathy	18	05.88
Naturopathy	09	02.84
Alternate Therapies and Home Remedies	08	02.61
Total	306	100.00

Table 2 presents the differentials in curative healthcare seeking behaviour by select background characteristics. The division has been in terms of public services, private services and alternate medicines and therapies. Three-quarters of the oldest old women used private health services; around 32.52 per cent of the young old women used alternative therapies followed by 19.80 per cent of the old-old women. None of the oldest old women reported use of alternative therapies; probably the gradual cure procedures of the alternative therapies could not adequately satisfy the symptomatic relief that allopathic medicines provided. All the slum dwelling older women went to public hospitals and dispensaries in case of ailments owing to the low cost treatment options available there. In terms of marital status, 32.61 per cent of the never married women used public services; around 15.62 per cent of the never married women used the same. Close to three fourths (73.96%) of the currently married women used private services; family/spousal support, providing and facilitating the necessary support for the same. Around 53.19 per cent of the Muslim elderly women and 31.25 per cent of the Christian elderly women used public services. The resorting to alternative therapies was highest among Hindu elderly women (38.16%); probably the affinity to culturally congruent traditions and the 'Indian medicine' traditions propelling the same. Around 15.62 per cent of the Parsi elderly women and 12.19 per cent of the Jain elderly women also used alternative therapies/medicine. None of the Muslim and Christian elderly

women reported the use of alternate therapies. Majority (78.13%) of the Parsi elderly women used private services, followed by Jain (68.66) and Christian (68.75) elderly women. This was due to the fact that community based services are available for Parsi women and for Jain elderly women economic security facilitated the same. For Christian elderly women low cost church sponsored private medical services were available and hence there was a greater use of private services among Christian elderly women. In terms of education levels, 38.46 per cent of the elderly women with upto school level education used public services followed by 21.05 per cent of the women with graduate level qualifications and 15.87 per cent of the women with postgraduate and above level qualifications. None of the women with lesser education levels used alternate medicine techniques; around 31.75 per cent of the women with higher education levels used alternate therapies and medicines. Hence the awareness of alternate services increased with education levels as also the conceptions of health and healthcare broadened due to education levels. In terms of education, the in service/employed women used private services; around 23.52 per cent of the retired elderly women used public services as also one-fourth of the homemakers – financial considerations being primary in the same. Close to one-fourth (23.52%) of the retired elderly women used alternative medicines and around three-fifths (59.60%) of the never employed/homemakers used private services. Two-fifths (41.24%) of the women living with extended families and one-fifths (22.73%) of the women living in institutions used public services. One-fifth of the women residing with families – spouse and children used alternative medicines as also one-fifth of the women living alone. The long terms and stable cure procedures of the alternate therapies propelled the same. The use of public/municipal services was higher among women with poor (71.43%) and average (24.84%) nutrition levels. All the elderly women with very good nutrition levels used private services. Alternate medicine usage was highest among elderly women with good nutrition levels (43.96%) and around 12.42 per cent of the women with average nutrition levels also used alternative medicine; close to three-fifths (62.74%) of them used private services.

Table 2
Curative Healthcare Seeking Behaviour by Select Background Characteristics

Background Characteristics	*Curative Healthcare Seeking Behaviour (in per cent)*			*Total Number*
	Public/ Municipal Services	*Private Services*	*Alternate Medicines and Therapies*	
Age				
60–69 Years	20.32	47.16	32.52	123
70–79 Years	24.75	55.45	19.80	101
80 and above	24.39	75.61	00.00	82
Place of Residence				
Slum	100.00	00.00	00.00	18
Island city	22.32	50.90	26.78	112
Suburbs	15.34	67.62	17.04	176
Marital Status				
Currently married	15.62	73.96	10.42	96
Never married/single	32.61	45.65	21.74	46
Widowed	24.19	51.62	24.19	124
Divorced	23.81	52.38	23.81	21
Separated	26.32	47.37	26.31	19
Religion				
Hindu	15.27	46.57	38.16	131
Muslim	53.19	46.81	00.00	47
Christian	31.25	68.75	00.00	32
Parsi/Zoroastrian	06.25	78.13	15.62	32
Jain	19.15	68.66	12.19	41
Others	21.74	78.26	00.00	23
Educational Level				
No Formal Education	00.00	100.00	00.00	01
Upto School Level	38.46	61.54	00.00	52
Graduate	21.05	57.90	21.05	190

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Postgraduate, Professional Qualifications and Above	15.87	52.38	31.75	63
Occupational History/Status				
In service/employed	00.00	100.00	00.00	06
Retired	23.52	52.96	23.52	170
Part time work	16.12	67.75	16.13	31
Never employed/Homemaker	25.25	59.60	15.15	99
Type of Living Arrangement				
Living alone	10.99	67.03	21.98	91
With spouse	09.62	71.15	19.23	52
With spouse and children	22.73	54.54	22.73	44
With children, grandchildren and other relatives/extended family	41.24	38.14	20.62	97
In institutions	22.73	77.27	00.00	22
Nutrition Levels				
Poor	71.43	28.57	00.00	21
Average	24.84	62.74	12.42	161
Good	16.48	39.56	43.96	91
Very good	00.00	100.00	00.00	33
Total Number				306

Preventive Healthcare Seeking Behaviour

Elderly women were asked about their preventive healthcare strategies; that is, what is the main thing that they do to remain healthy. The purpose was to identify the core preventive strategy to maintain health and well-being. Table 3 presents the core preventive healthcare option of elderly women. Close to half (46.73%) proposed balanced nutrition as the main preventive mechanism. Around 29.08 per cent laid emphasis on exercise and 8.49 per cent and 7.51 per cent respectively stressed on maintaining social networks and meditation and spirituality as maintaining health and preventing ailments. Around 5.55 per cent proposed productive engagement such as volunteerism and 2.61 per cent said that being mentally agile by doing mental occupations such as reading and solving puzzles was the key to maintain health.

Table 3

Main Preventive Healthcare Seeking Option

Main Preventive Healthcare Seeking Option	*Frequency*	*Percentage*
Balanced Nutrition	143	46.73
Exercise	89	29.08
Meditation and Spirituality	23	07.51
Maintain Social Networks	26	08.49
Volunteerism	17	05.55
Mental Occupations	08	02.61
Total	306	100.00

Table 4 presents the differentials in preventive healthcare strategies by select background characteristics. Close to one-fourth (23.58%) of the young old women claimed balanced nutrition as the main preventive healthcare strategy; half of the old-old (50.50%) and three-fourths of the oldest-old (76.84%) proposed the same. The propensity for exercise to be the main strategy also declined with age–40.65 per cent of the young old claimed exercise to be the main strategy; around 29.70 per cent of the old-old and 10.97 per cent of the oldest old claimed exercise to be the main strategy. Similarly for other aspects such as meditation, social networks, volunteerism and mental occupations, 35.77 per cent of the young old claimed that to be the main preventive mechanism; 19.80 per cent of the old-old and 12.19 per cent of the oldest old. Majority (88.89%) of the slum dwelling women expected balanced nutrition to be the main strategy. Nutrition was perceived to be important by 67.75 per cent of the widows; exercise was the core for 47.61 per cent of the divorced and 47.36 per cent of the separated elderly women. In terms of other strategies, 31.25 per cent of the currently married women and 43.48 per cent of the single women perceived the same as important. This was vis-à-vis 8.06 per cent of the widows who sought nutrition to be important rather than other mechanisms. Close to seventy per cent of the Christian and Muslim elderly women (68.75 and 68.09%) perceived nutrition to be the core as also half (53.12%) of the Parsi elderly women. Exercise was perceived to be the core by close to two-fifths (38.16%) of the Hindu respondents and 31.25 per cent of the Parsi respondents. Only 15.63 per cent of the Christian elderly women perceived exercise to be the

core. In terms of other strategies around 46.34 per cent of the Jain respondents and 30.53 per cent of the Hindu elderly women perceived aspects such as meditation and volunteerism to be the core. This was vis-à-vis 15.62 per cent respectively for Christian and Parsi elderly women and around one-fifths (10.64%) of the Muslim elderly women. Probably the alignment to Indic spirituality was higher among Hindu and Jain elderly women and thus the penchant for meditation and other aspects related to the same as a preventive heath promoting mechanism. In terms of education, two fifths (61.54%) of the elderly women with upto school level education perceived nutrition to be important; around half (53.17%) of the women with graduate level qualifications perceived that to be important and around 14.30 per cent of women with higher qualifications perceived that to be the core. Exercise and other strategies showed a reverse trend with respondents having higher levels of education attributing more importance to the same. Around 47.61 per cent of the elderly women with postgraduate and above level qualifications perceived exercise to be the core as opposed to 19.23 per cent of the respondents with upto school level education. Similarly 38.09 per cent of the women with higher qualifications perceived other strategies to be the core as opposed to 19.23 per cent of the women with lower education levels. In terms of occupation, half (53.54%) of the retired women perceived nutrition to be the core vis-à-vis 35.48 per cent of the women in part-time employment and 39.40 per cent of the never employed women. One-third of the women in part-time work (32.26%) and one-third homemakers (30.30%) perceived exercise and other strategies to be the core. Half (52.75%) of the women living alone and close to two-fifths of the women living with families (42.31% of women residing with spouse, 31.82% of women with spouse and children and 38.16% of women with extended families) perceived nutrition to be the core. Close to one-fifths of the women living alone perceived exercise and other strategies to be important. Exercise was perceived to be the core by 38.46 per cent of the women residing with spouses and 45.45 per cent of the women residing with spouses and children as also 30.92 per cent of the women residing with extended families. A higher per cent 26.37 per cent of the women residing alone perceived other engagements to be the core as also 30.92 per cent of the women with extended families. Around 19.23 per cent of the women residing with spouse and 22.73 per cent of the women residing with spouse and children

perceived other engagements to be the core. Hence living alone, as also with extended families, facilitated elderly women to explore other productive engagement options such as meditation and volunteerism, that then also manifested as health and well-being promoting. Elderly women with lower nutrition levels perceived nutrition to be the core – all women with poor nutrition levels and three-fourths (72.67%) of the women with average nutrition levels perceived that to be the core. Half (53.85%) of the women with good nutrition levels and three-fifths (60.61%) of the women with very good nutrition levels perceived exercise to be the core vis-à-vis 12.42 per cent of the women with average nutrition levels. Around 14.91 per cent of the women with average nutrition levels engaged in other health promoting strategies; around two-fifths of the women with good and very good nutrition levels (40.66% and 39.39% respectively) perceived other engagements to be the core health promoting and preventive strategies.

Table 4

Main Preventive Healthcare Seeking Strategy by Select Background Characteristics

Background Characteristics	*Main Preventive Healthcare Seeking Strategy (in per cent)*			*Total Number*
	Balanced Nutrition	*Exercise*	*Others – meditation, Social Networks, Volunteerism, Mental Occupations*	
Age				
60–69 Years	23.58	40.65	35.77	123
70–79 Years	50.50	29.70	19.80	101
80 and above	76.84	10.97	12.19	82
Place of residence				
Slum	88.89	11.11	00.00	18
Island city	31.26	35.71	33.03	112
Suburbs	52.28	26.70	21.02	176
Marital Status				
Currently married	37.50	31.25	31.25	96
Never married/single	34.78	21.74	43.48	46

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Widowed	67.75	24.19	08.06	124
Divorced	19.06	47.61	33.33	21
Separated	15.80	47.36	36.84	19
Religion				
Hindu	31.31	38.16	30.53	131
Muslim	68.09	21.27	10.64	47
Christian	68.75	15.63	15.62	32
Parsi/Zoroastrian	53.12	31.25	15.63	32
Jain	29.27	24.39	46.34	41
Others	82.61	17.39	00.00	23
Educational Level				
No Formal Education	100.00	00.00	00.00	01
Upto School Level	61.54	19.23	19.23	52
Graduate	53.17	25.78	21.05	190
Postgraduate, Professional Qualifications and Above	14.30	47.61	38.09	63
Occupational History/Status				
In service/employed	33.33	50.00	16.67	06
Retired	53.54	27.05	19.41	170
Part time work	35.48	32.26	32.26	31
Never employed/Homemaker	39.40	30.30	30.30	99
Type of Living Arrangement				
Living alone	52.75	20.88	26.37	91
With spouse	42.31	38.46	19.23	52
With spouse and children	31.82	45.45	22.73	44
With children, grandchildren and other relatives/extended family	38.16	30.92	30.92	97
In institutions	100.00	00.00	00.00	22
Nutrition Levels				
Poor	100.00	00.00	00.00	21
Average	72.67	12.42	14.91	161
Good	05.49	53.85	40.66	91
Very good	00.00	60.61	39.39	33
Total Number				306

Themes on the Importance of Health and Healthcare Strategies

In response to the open ended query on the importance of health and the healthcare strategies, the following themes emerged. The importance of health manifested as the following thematic groupings:

- Economic Metaphor and Rationalisation as suggested by aspects such as 'health is wealth'
- Existential Categorical Imperative implied through 'health is the main thing, priority'
- Precursor and Apriori to Happiness as signified through 'if we are in good health then we can lead a happy life'
- Prerogative to Self Autonomy as suggested through 'if we are in good health only then it is possible to do all things by ourselves' and 'for going about one's daily tasks and ensuring that we are not dependent on others, it is important to remain healthy'
- Core to Ontological Security, Soul Enrichment and Transcendence as implied through 'only in a healthy body can a healthy mind exist' and 'we can work towards higher goals in life and engage in prayers and other spiritual activities only if we are healthy, mobile and not bedridden'
- Enabling Endowment of Negotiation Capabilities for Social Exchange signified through 'health gives good social relations and social status, we are not labelled as ill and undesirable'

Enabling Functionality as suggested through 'staying healthy means we can go about our daily activities in a smooth and uninterrupted way'

Healthcare strategies sought revealed the following thematic groupings

- Rhythm and Regularity as suggested through, 'I follow a routine. There is a set of daily activities that I do in a particular manner to remain healthy'.
- Practiced Abstinence as implied through, 'I eat less and absolutely stay away from pungent food'.
- Religiosity Propelled Abstinence as suggested through, 'I follow all fasts and rituals of our religion. That way our forefathers ensured that there is a natural balance in our dietary patterns.

During fasts we eat sattwic food and stay away from harmful practices and that is the key to good health.'

- Internalising embodied atrophy and Seeking Parallel Control Mechanisms as suggested through, 'it is natural that with age certain age related problems and issues come in. We have to take care and do what is required to maintain good health in old age.'
- Longitudinal Care and Maintenance as suggested through, 'healthcare is not a one time thing. To be healthy in old age means that we have to take care right from the beginning'.
- Positive Psychology Lens – Sense of Optimism and Gratitude as suggested through, 'I keep a positive mind and pray to God. Also whatever happens is for the good. Even health ailments when they happen they are for a purpose. Hence we should be thankful to God for whatever we have. That is the key to remain healthy.'
- Spiritualism and Theism as suggested through, 'regular meditation and prayers. That is the way to remain fit and fine.'
- Hybridising and Combining Medicinal Approaches as suggested through, 'apart from visiting the doctor for main health problems, I also do home remedies.' 'For certain things ayurvedic medicines are good – they are made of natural things and hence they are good.' 'Homeopathy is good as it removes certain ailments from its roots and moreover there are also no side effects. Hence for things like cold, acidity – homeopathy is good.'

Arenas of Care

Elderly women were asked about the main arenas of care for maintaining health. Close to half, around 53.27 per cent proposed, family, i.e., spouse and children as source of care. Around 29.08 per cent suggested kin relations such as close relatives and grandchildren as caregivers. Around 4.25 per cent relied on neighbourhood social relations, 3.92 per cent on the services of professional caregivers, around 1.63 per cent on community services and 0.65 per cent were dependent on state aid. Around 7.19 per cent relied on institutions – elderly women residing in institutions relied on institutional care for their healthcare needs.

Table 5
Arenas of Care for Elderly Women

Arenas of Care	*Frequency*	*Percentage*
Family – spouse and children	163	53.27
Kinship Relations such as close relatives, grandchildren	89	29.08
Neighbourhood/social relations	13	04.25
Services of Professional Caregivers	12	03.92
Care in Institutions	22	07.19
Ethnic Community/Caste Grouping/Sub Caste Grouping Services	05	01.63
State Aid	02	00.65
Total	306	100.00

Table 6 depicts the arenas of care in terms of family and others by select background characteristics. Close to three-fifths of the young old and old-old sought care through family (56.91% of the young old and 59.70% of the old-old) and around two-fifths of the oldest old (40.24%) sought family care. Around one-third of the slum dwelling women had family as the main source of support and the rest were dependent on other sources. All the currently married women had family as the main source of support; around half (52.63%) and three-fifths (61.90%) of the separated and divorced women respectively had family as the main source of support. However, only 32.25 per cent of the widowed women and 8.69 per cent of the never married women had family as the core support system. In terms of religion, around 68.70 per cent of the Hindu women and 85.36 per cent of the Jain elderly women had family as the main source of support. Around 31.25 per cent of the Parsi and Christian women respectively had family as the core and 27.66 per cent of the Muslim elderly women had family as the core support mechanism. Around two-fifths of the women with upto school level education (44.23%) and three-fifths of the women with graduate level qualifications had family as the core support mechanism. Around 31.75 per cent of the women with higher qualifications had family support. This could be linked to the fact that women with higher qualification levels have delayed marriages and hence fewer children or have chosen to never marry owing to which

there is a lack of conjugal connections. Further they would be in salaried employment in their working years giving them little time to socialise and build ties across extant relationships. The propensity for highly educated women to opt for non-conventional lifestyles and modes of existence is higher than women with lesser qualification levels which then has a direct connection with the social networks. The type of living arrangement had a predictable relationship with the core arena of care. All elderly women living with families, i.e., spouse and children had family has the main source of health care. Half (51.55%) of the women residing with extended family relied on the same as the source of health care and the rest relied on other sources. None of the women living in institutions and 18.68 per cent of the women residing alone had family and close kin as healthcare supports. In terms of nutrition levels, better nutrition levels signified higher socio-economic status and hence better support systems; three-fifths (65.93%) of the women with good nutrition levels and 90.91 per cent of the women with very good nutrition levels had family and close kin as core supports for health care.

Table 6

Cross Table of Arenas of Care by Select Background Characteristics

Background Characteristics	*Arenas of Care (In per cent)*		*Total Number*
	Family	*Others*	
Age			
60–69 Years	56.91	43.09	123
70–79 Years	59.40	40.60	101
80 and above	40.24	59.76	82
Place of residence			
Slum	33.33	66.67	18
Island city	66.96	33.04	112
Suburbs	45.45	54.55	176
Marital Status			
Currently married	100.00	00.00	96
Never married/single	08.69	91.31	46

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Widowed	32.25	67.75	124
Divorced	61.90	38.10	21
Separated	52.63	47.37	19
Religion			
Hindu	68.70	31.30	131
Muslim	27.66	72.34	47
Christian	31.25	68.75	32
Parsi/Zoroastrian	31.25	68.75	32
Jain	85.36	14.64	41
Others	21.74	78.26	23
Educational Level			
No Formal Education	100.00	00.00	01
Upto School Level	44.23	55.77	52
Graduate	63.15	36.85	190
Postgraduate, Professional Qualifications and Above	31.75	68.25	63
Occupational History/Status			
In service/employed	100.00	00.00	06
Retired	29.41	70.59	170
Part time work	32.26	67.74	31
Never employed/Homemaker	97.98	02.22	99
Type of Living Arrangement			
Living alone	18.68	81.32	91
With spouse	100.00	00.00	52
With spouse and children	100.00	00.00	44
With children, grandchildren and other relatives/extended family	51.55	48.45	97
In institutions	00.00	100.00	22
Nutrition Levels			
Poor	41.62	58.38	21
Average	39.13	60.87	161
Good	65.93	34.07	91
Very good	90.91	09.09	33
Total Number			306

Lubben Social Network Scale–18

The Lubben Social Network Scale consists of a set of 18 statements relating to social networks of family, community and neighbourhood and scoring is in a Likert type format. This scale score signifies the social networks available to the individual on a range of 0 to 90; lower scores indicating poor social networks. Around 34.31 per cent had fair scores and 35.62 per cent had good scores. Close to one-fifth, i.e., 20.26 per cent had very good scores. Around 8.17 per cent had average scores and 1.63 per cent had poor scores. Hence in general social networks were of fair and good nature with the general propensity to rely on them in times of need.

Table 7
LSNS–18 Score Range

LSNS–18 Score Range	*Frequency*	*Percentage*
0–18 (poor)	05	01.63
19–36 (average)	25	08.17
37–54 (fair)	105	34.31
55–72 (good)	109	35.62
73 – 90 (very good)	62	20.26
Total	306	100.00

Table 8 presents the differentials LSNS–18 score ranges by select background characteristics. They have been grouped as poor and average; fair; good and very good. The young-old had better LSNS scores than the oldest old signifying thereby that social networks declined with age. None of the young old had poor and average scores; around 83.74 per cent had good and very good scores. Around 30.48 per cent of the oldest-old women had poor and average scores and around one-fourth (26.84%) had good scores. Close to half of the elderly women residing in slums (55.55%) had poor scores. None of the currently married, divorced and separated women had poor scores. Around 10.86 per cent of the never married elderly women and 16.13 per cent of the widowed elderly women had poor/average scores. Close to four-fifths (79.17%) of the currently married elderly women had higher order scores; around three-fifths of the divorced and separated women also had higher end scores. Around 12.50 per cent of the Christian and Parsi elderly women had poor and average scores;

close to half (56.25%) had higher end scores. Around 61.84 per cent of the Hindu elderly women had higher end scores and 70.21 per cent of the Muslim women had good/very good scores. Three-fourths (73.17%) of the Jain elderly women had fair scores. Education levels were positively associated with the LSNS scores; around 9.61 per cent of the women with upto school level education and 13.15 per cent of the elderly women with graduate level qualifications had poor scores. None of the women with higher qualifications had poor scores and 84.13 per cent of them had good and very good scores. Also half (52.64%) of the women with graduate level qualifications had good and very good scores. Similarly better scores were more prevalent among those in employment (all the in service elderly women and 67.74% of the women in part time work) as also the homemakers (79.80%). Among the retired elderly women close to half (47.06%) had fair scores and 38.24 per cent had good and very good scores. In terms of living arrangements, lower scores were prevalent among those living alone (21.98%) and in institutions (45.45%). Majority of the women residing with families (80.77% with spouse, 77.27% with spouse and children and 69.07% with extended families) had better scores and none of them had scores in the poor range. Nutrition levels also depicted predictable trends; one-fourth (23.80%) of the women with poor nutrition levels and 12.42 per cent of the women with average nutrition levels had lower scores. Around 72.53 per cent of the women with good nutrition levels and 69.70 per cent of the elderly women with very good nutrition levels had higher order scores.

Table 8

LSNS–18 Score by Select Background Characteristics

Background Characteristics	*LSNS–18 Score Range (in Percent)*			*Total Number*
	Poor and Average	*Fair*	*Good and Very Good*	
Age				
60–69 Years	00.00	16.26	83.74	123
70–79 Years	04.95	59.40	35.65	101
80 and above	30.48	42.68	26.84	82
Place of residence				
Slum	55.55	44.44	00.00	18

Contd...

Contd...

Island city	08.92	41.96	49.12	112
Suburbs	05.68	28.41	65.91	176
Marital Status				
Currently married	00.00	20.83	79.17	96
Never married/single	10.86	65.22	23.92	46
Widowed	16.13	40.32	43.55	124
Divorced	00.00	38.09	61.91	21
Separated	00.00	36.84	63.16	19
Religion				
Hindu	07.63	30.53	61.84	131
Muslim	08.51	21.28	70.21	47
Christian	12.50	31.25	56.25	32
Parsi/Zoroastrian	12.50	31.25	56.25	32
Jain	09.76	73.17	17.07	41
Others	17.39	21.74	60.87	23
Educational Level				
No Formal Education	00.00	100.00	00.00	01
Upto School Level	09.61	57.69	32.70	52
Graduate	13.15	34.21	52.64	190
Postgraduate, Professional Qualifications and Above	00.00	15.87	84.13	63
Occupational History/Status				
In service/employed	00.00	00.00	100.00	06
Retired	14.70	47.06	38.24	170
Part time work	16.13	16.13	67.74	31
Never employed/Homemaker	00.00	20.20	79.80	99
Type of Living Arrangement				
Living alone	21.98	47.25	30.77	91
With spouse	00.00	19.23	80.77	52
With spouse and children	00.00	22.73	77.27	44
With children, grandchildren and other relatives/extended family	00.00	30.93	69.07	97
In institutions	45.45	54.55	00.00	22
Nutrition Levels				
Poor	23.80	71.43	04.77	21
Average	12.42	37.27	50.31	161
Good	05.49	21.98	72.53	91
Very good	00.00	30.30	69.70	33
Total Number				306

Concluding Remarks

In terms of health issues of elderly women in the urban context, osteoporosis and osteoarthritis as well as depression and lifestyle diseases such as cardiovascular diseases and diabetes as well as sensory impairments need to be understood. Differentials and multiple jeopardies arise on account of class-ethnicity and living arrangement related diversities as well as for the oldest old women. Further issues get further complicated for widows and never married women as well as for elderly women residing in institutions and with lower education and nutrition levels.

The findings find parallel in some of the findings of the following studies on elderly women in the Indian context. The situation of widows in terms of health, healthcare and care arenas finds parallels in Mari Bhat's (1998) study on widows. The role of income and education in seeking healthcare and its nature among elderly women has been discussed in the study by Gupta, *et al.*, (2001). The tendency to prefer a combination of medicinal strategies among elderly women has been also discussed by Himabindu (2002) in a study of elderly women in Anandapuram district. Differentials in healthcare preferences and arenas of care by living arrangement and marital status among elderly women has been dealt with by Sudha, *et al.*, (2004) in a study on intergenerational family support in three south Indian states – Kerala Tamil Nadu and Karnataka. Among the other need based factors, widowhood was an important factor receiving support. Panda's (2005) study on elderly women in Delhi also revealed that widowhood had repercussions on arenas of care and healthcare seeking behaviour. Wadley's (2008) study in Karimpur district of western UP revealed that although a range of healthcare options are available for elderly women, the health of elderly women in general has taken a backseat in a gender system that operates in within a hierarchical caste and class system. Further Agarwal and Arokiasamy's (2010) analysis of NSSO 60th round data in two states of Maharashtra and UP has revealed that substantial disparities in healthcare utilisation existed among older women by socio-economic factors; an aspect which has been corroborated by the present findings. Further religiosity-spirituality as

promoting health and well-being also has adequate corroboration in Indian literature (Pandya, 2010).

Hence practice and policy need to particularly adapt an engendered lens by looking at aspects of ageing women such as the oldest old age groups, ethnic and religious minorities, widows and single women as also women with lower education levels and residing alone and in institutions. Healthcare options need to be viewed laterally – by combining mainstream care with other alternatives such as alternative medicine, therapies, meditation and spirituality as well as through enhancement of social networks. Preventive healthcare mechanisms, therapy amalgam, spirituality and religiosity enhancement as well as social network embellishment work as desirable strategies of working with elderly women.

Notes

1. Of the total number in the final list 302 women were not interested in answering the schedule, 125 elderly women did not want the investigator to come to their residence nor were they willing to come to a common meeting place, 139 women were unwell and hence their caregivers did not wish to give an appointment for the interview and 161 older women were out of station during the time period of data collection. The overall response rate was 29.62 per cent.
2. Thirty-two such cases were encountered – either with language issues or with impairments in which case the responses were jointly obtained through the primary caregiver and the elderly women. However this would be a limitation of the study as elderly women with severe physical and mental illnesses were automatically excluded from the study as also those who did not have access to the identity card system. In some cases, although the assistance of primary caregivers' was undertaken (particularly in situations of severe hearing impairment or cognitive decline and dementia cases)

in all situations this was not possible, particularly in cases of institutionalisation.

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Pattern of Decline of Digit Span Tasks in Adults: A Comparative Study of Pattern of Decline of Digit Forward Span and Digit Backward Span Tasks in Adults

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ABSTRACT

The present study attempts to compare the pattern of decline of digit forward span and digit backward span tasks in adults in the age range of 40-to-above 80 years. A total of 80 adults (40 males and 40 females) participated in the present study. All the participants were divided into five age groups: 40-50: 51-60; 61-70; 71-80; and above 80 years. The results of this study indicate that normal aging affect the DBS earlier than DFS in the course of life. At the same time, the study suggests that both DBS and DFS decline with a similar rate up to 60-70 years; and after 70 years, saturation in span takes place. The findings might help in differentiating normal versus pathological aging as well as framing research studies in the direction of digit backward and digit forward span tasks. It can also help in studying the variations of these tasks in different disordered population.

Key Words: Working memory, Digit forward span, Digit backward span

Working memory (WM) is a work-space that allows a cognitive system for short-term storage of new or previously learned information and their manipulation to perform a cognitive task (Baddeley, 1986). Just and Carpenter, (1992) reported that WM is a cornerstone of higher-order complex cognitive function, needed for goal-directed behaviors. WM also plays a major role in language processing (Baddeley, 1986; Just & Carpenter, 1992; Baddely, 2003).

Adults above 60 years often reported difficulty to remember recent experiences. Developmental research suggests that ageing associated decline in WM is a core factor to general cognitive-ageing effects (Hasher & Zacks, 1988). Ageing also leads to several neuro-anatomical, physiological, psychological, and cognitive changing in a person (Mungas, *et al.,* 2003). The neuro-anatomical changes associated with ageing are mostly seen in prefrontal cortex of frontal lobe. The change or decline of this region with normal ageing significantly affects the executive functions (West, 1996, 2000). Executive functions are one of the important components of WM.

Nearly all measures of working memory developed till date, involved the measurement of span. The memory span is the maximum number of sequential information an individual can remember accurately (Gathercole, *et al*., 1999). Span activities used to quantify the memory span can be classified as either simple span (SS) or complex span (CS) task. A SS task requires only the passive retention of information, presumed to measure phonological short-term memory; whereas, CS task is considered to measure verbal and executive WM. It requires effortful processing of information while trying to retain lists of items for a short interval (Bayliss, *et al.,* 2005). Effortful processing needs coordination of storage and processing–coordination. This coordination is one of the primary functions of executive WM. Amongst span tasks, counting span and reading span tasks are maximally prefer because these are reliable measures of WM (Conway, *et al*., 2005). Therefore, much more data are available from these tasks compared to other tasks to measure WM capacity e.g., spatial WM span tasks (Kane, *et al.,* 2004; Shah & Miyake, 1996). Clinical researches most commonly use digit span tasks amongst all span tasks to measure WM capacity (Conway *et al*., 2005).

This test comprised of digits forward span (DFS) and, digits backward span (DBS) tasks.

Although, DFS and DBS is strongly influenced from ageing, other variables like level of education, language of a person, gender, health conditions, and culture may also influence to some extent. To understand the influence of demographic and individual variable on working memory, Mejia *et al.,* (1998), analyzed the variables influencing memory. They found that other than age, education, and gender differences, academic history, working history, physical activity and leisure activities had also a significant effect on ageing. Clark *et al*., (2004) studied the effect of age, education, and culture differences on DFS and DBS tasks in Australian-born women within the age range of 56-67 years on 2574 Spanish-speaking subjects. Both education level and cultural differences had a significant effect on DFS and DBS in Spanish adults. It was concluded that reading and writing ability influences an individual development, which can be measured as digit span task.

From the review of previous studies it is clear that ageing has a significant effect on decline of digit forward span (DFS) and digit backward span (DBS). Most of the studies looked for the span at different age groups. Limited studies had focused on the pattern of decline of both these measures along with increased age. Therefore, the present study attempts to investigate the effect of ageing on DFS and DBS tasks of working memory in the age range of 40-to-above 80 years. The study attempts in presenting a deeper insight in the pattern of decline in the working memory of a person as the age progresses; eventually, it also helps in differential diagnosis between ageing associated memory impairment and memory impairment caused due to any pathological reason.

Method

Participants

A total of eighty native Hindi speaking adults within the age range of 40-to- above 80s years were selected for the study. The sample was classified into five groups according to age of participants. Group I: aged 40-50 years (M = 45.12, SD = 2.7); Group II: aged 51–60 years

(*M* = 55.87, *SD* = 3.5); Group III: aged 61-70 years (*M* = 65.81, *SD* = 2.5); Group IV: aged 71-80 years (*M* = 75.62, *SD* = 1.7); and Group V: aged above 80 years (*M* = 84.25, *SD* = 4.3). There were eight males and eight females in each of the age groups. All the participants belonged to middle socioeconomic status as assessed on scale for measuring the socioeconomic status of family (Aggarwal, *et al*., (2005). All had education level higher than 9 years in Hindi medium. Mean schooling years for the sample was 11.08 (*SD*= 3.6). All the subjects were formally screened for speech and hearing abilities by the experimenter and those who passed the screening were included in the study. The participant had no present/past history of any neurological, psychological problems. It was ensured using Hindi Mental State Exam (Ganguli, *et al*., (1995). Participants scoring greater than or equal to 25 on the Hindi Mental State Exam (HMSE) were taken up for the study. None of the participants scored less than the cut-off point in the HMSE was included in the study. Mean sample score was 28.5 (*SD*= 1.3). Individuals with any Axis I psychiatric diagnosis according to the DSM-IV-TR (American Psychological Association, 2002), presence of dementia, and severe untreated sight and hearing disorders were excluded from the study. In addition, a person (elderly person other than subject) who became familiar with the tasks as experimenter was administering the test on subjects; was also excluded from the study.

Instruments

I *Scale for measuring the socioeconomic status of a family:* The scale developed by Aggarwal, *et al*., (2005). The scale consists of 22 questions. The scoring was based on these questions. On the basis of total scores obtained by the subjects they were classified into upper high, high, upper, middle, lower middle, poor and very poor/ below poverty line status.

II. *Mini International Neuropsychiatry Interview (MINI):*The MINI is a semi-structured interview developed by Sheehan, *et al*., (1998), to assess 17 of the most commonly occurring Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and International Classification of Diseases, 10threvision (ICD10) psychiatric disorders. It consists of a brief structured interview,

following diagnostic criteria similar to those found in the DSM-IV and in the ICD-10.

III. *Hindi Mental State Examination (HMSE):* HMSE is a Hindi version of the Mini mental state examination (MMSE), developed by Ganguli *et al*., (1995), screens individuals with cognitive impairment. HMSE consists of 22 test items covering several areas of cognitive functions such as orientation (time and place), memory, attention and concentration, recognition of objects, language function (comprehension and expression), motor functioning and praxis. The time to complete the instrument was approximately 10 minutes in all. The cut-off point set for this sample was = 25 points.

IV. *Working memory: Digit Span Test:* The digit span test consisted of sets of digits, starting from three digits (e.g., 8 9 6) up to seven digits (e.g., 7 5 3 6 1 9 4). These sets of digits were taken from the digit forward and digit backward subtest of "Cognitive-Linguistic Assessment Protocol for Adults" (CLAP) in Kannada (Kamath, 2001). In DFS task participants were asked to verbally repeat a set in same sequence as the examiner. Test was started from a set of 3 digits continuing to a maximum a set of 7 digits. There were three trials per set. Span was calculated as a set at which two out of three trials were repeated correctly. Digits were presented at the rate of one digit per second. However in DBS task the participants were asked to verbally repeat the numbers in reverse order. The digit sequences used in the tasks and the criterion for deciding span were same as DF tasks.

Procedures

Participation in this study was voluntary. At first participants signed an informed consent form. This document aimed at informing the participants about the objectives, justifications, and procedures of this investigation. After that, they had to complete socio-cultural questionnaire, MINI, and HMSE. At this moment, psychiatric and neuropsychiatric symptoms were evaluated by a psychologist trained in diagnostic evaluation in older individuals, based on the MINI and HMSE scores and on structured interviews. The interviews were conducted under a neuropsychologist's guidance. At last, participants

underwent digit span tasks so that their working memory may be evaluated. The participants were tested in a quiet, noise free environment at home or clinical setting. All the data was audio-video recorded with digital camera (Sony 1080). Finally the 10 per cent of the audio-video recorded data were retested by three speech-language pathologists for inter-judge reliability.

Results

A commercially available statistical package for the Social Science (SPSS) version 16.00 was used for the statistical analysis. Table 1 shows the mean and standard deviation (SD) for span (DFS and DBS) across age groups. DFS was higher than DBS (Figure 1). Paired samples *t*-test (a = 0.05) explored a significant difference between these tasks with $t = 17.03$, $p = 0.001$.

Table 1
Mean (M) and Standard Deviation (SD) of DFS and DBS for the Five Age Groups

Age Group	*DFS*		*DBS*	
	Male	*Female*	*Male*	*Female*
40-50 years	6.5 (.53)	5.75 (.46)	4.87 (.35)	4.37 (.51)
51-60 years	6.0 (.75)	5.25 (.46)	3.75 (.70)	3.87 (.83)
61-70 years	4.5 (.75)	4.87 (.64)	3.37 (.51)	3.12 (.35)
71-80 years	4.87 (.83)	4.37 (.74)	3.37 (.51)	3.12 (.35)
Above 80s	5.0 (.53)	3.87 (.64)	3.62 (.74)	3.0 (0)
Total	5.37 (1.0)	4.82 (.87)	3.8 (.79)	3.5 (.71)

Note: Standard deviations appear in parentheses.

Multivariate Analysis of Variances (MANOVA) was performed to compare the DFS and DBS tasks across age groups and gender. The results are shown in Table 2. It revealed significant effects of age group for the DF span $F(1, 77) = 20.51$, $p =$? 0.001], and for DB span [$F(1, 77) = 5.31$, $p =$? 0.001]. The comparisons of the DFS and DBS across age groups are shown in Figure 2.

Table 2

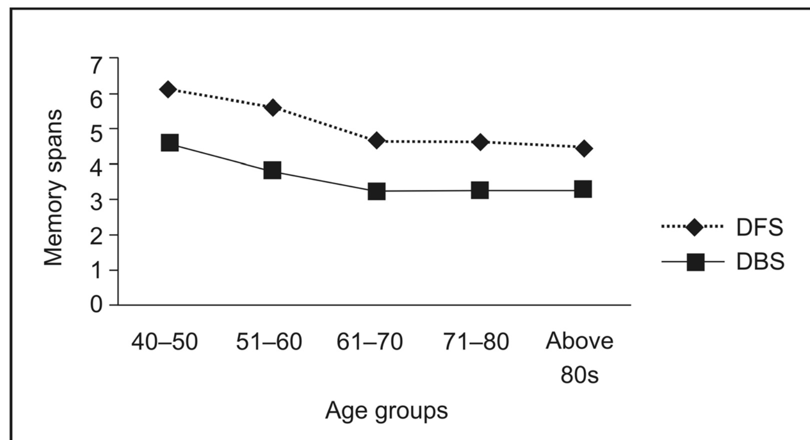
F value and p-value of age and gender for DFS and DBS.

Tasks	*Age Groups*		*Gender*		*Age* Gender*	
	F	*p*	*F*	*P*	*F*	*P*
DFS	20.51	? 0.001*	14.35	? 0.001*	3.01	0.02*
DBS	5.31	? 0.001*	6.14	0.01*	1.13	0.34

Note: (*p = 0.05= significant difference)

Figure 2

Comparison of DFS and DBS across 40-to-above 80s years.



Discussion

The study investigated the effect of ageing on pattern of decline of digit forward and digit backward span tasks of working memory in the age range of 40–above 80s. This was measured using DFS and DBS tasks. The result of present study showed that span for DF task was higher than DB, across all the age groups. This finding was also similar to some of the previous studies (e.g., Black, 1986; Hester, *et al.*, 2004; Wilde *et al.*, 2004). Our results indicated that, mean DFS (M = 5.1, SD = 0.9) was within normal range of 5-8 digits (Kaplan, *et al.,* (1991). However the mean DBS (M = 3.6, SD = 0.7) approximate towards the lowest value of normal range within 4-5 digits (Lezak *et al.*, 2004). The

difference between the DFS and DBS was also found within the normal range of 0.59 to 2 (Kaplan *et al*., 1991).

Although previous researches have revealed profound effect of aging on WM abilities, none of the studies has compared the effect of gender on DFS and DBS in adult age groups. Moreover, study by Gathercoel *et al*., (2004) has studied the effect of gender difference on working memory ability in young children within the age range of 4-15 years. Results of present study showed a significant age and gender difference effects on DFS and DBS of WM. The mean span of male was significantly higher than female for both the measure.

Similar ageing associated decline in both DF and DB span have been reported in previous studies (Hester *et al*., 2004; Wilde *et al*., 2004). In the present study, DF and DB span decreased by a rate of one digit per age group upto 61-70 years and 51-60 years respectively, and after that span remained constant. It may be noted that, ceiling effect was seen early for DBS than DFS tasks. This effect forces us to think about factors other than ageing, which affect the cognitive abilities. It is a common notion that reduced hearing acuity is pervasive with normal ageing. Thus, it is important to determine whether change in WM abilities is dependent on deficit of hearing acuity or not. It is important to mention that all the participants below age of 65 years had clinically normal hearing acuity. However, participants above 65 years had reported some amount of hearing deficits. This decline in sensory acuity might affect their cognitive tasks performance (Baldwin, 2002, 2007; Baldwin & Struckman-Johnson, 2002; Lunner, *et al*., 2009; Wingfield *et al*., 2005). Similar observations were observed during the study, that even, the digits were presented at louder voice they asked the experimenter to repeat the digits. . Participants reported that, even they could listen the digits quite well, to repeat them, they found difficulty in memorizing and recalling digits. Therefore, it is concluded that reduced and static span after age of 70 years may be due to sub clinical reduced hearing acuity that interact with normal aging differently.

In the present study, although the rate of decline was not uniform with age, but pattern of decline was found to be similar for both the measures (Figure 2). This type of pattern was reported in one of the studies by Hester *et al*., (2004) where they assumed that both DFS and

DBS tasks uses central executive. The similarity of results between the two studies is because of the fact that an identical protocol was used in both the studies, except the number of participants. Present study included the lesser participant ($N = 80$) than the earlier study ($N = 1030$). Alternatively, it was a notion that central executive has a significant importance in BS tasks performance, leading to greater rate of decline in DFS than DBS tasks.

Conclusion

The results of this study present some important facts. Firstly, the study indicates that normal ageing affect the working memory abilities for DBS earlier in the life span than DFS. Secondly, working memory ability declines with a similar rate up to 60-70 years. It also suggests that after 70 years, saturation in span takes place. Thirdly, gender has a significant effect on working memory indicating that males has a higher DF span than females. However, in DB span task, both males and females performed equally.

Lower performance of adults above 65 years of age on working memory tasks might be due to reduced sensory acuity. However, precise relationships between age associated reduced hearing acuity and normal ageing is not well understood. Also, how the interaction of reduced hearing acuity and normal ageing affect the working memory, is not well explained in the literature. In this study formal screening of the person for the hearing ability was not done as it was not the focus of the study. However, formal assessment for hearing ability, and detailed cognitive assessment are needed to address their influences on working memory in normal ageing. Apart from this, the results of present study provides a data base of digit forward and digit backward span of adult speaker. There are only a few studies that compare the influence of language on the DS tasks (Ellis & Hennelly, 1980; Stigler & Lee, 1986). The findings of the present study might help in differentiating normal versus pathological ageing as well as framing research studies in the direction of digit backward and digit forward span tasks. It can also help in studying the variations of these tasks in different disordered population.

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Quality of Life of Elderly: Hope Beyond Hurt

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ABSTRACT

The degree of dependence due to pathological conditions of health in basic daily living activities are making the elderly vulnerable to their physical disabilities, behavioural dynamics, environmental and social factors in the disablement process causing vital constrictions. 200 elderly boarders (100 men and 100 women) with physical disabilities, living in five institutions under the jurisdiction of the Kolkata Municipal Corporation, were studied to assess the degree of loneliness, the nature of social adjustment, the degree of spirituality and nature of forgiveness determining the level of quality of life. An interview schedule with questions on attributes of Quality of life, revised UCLA loneliness scale (RULS) and social adjustment scale were used. It was found that Loneliness and daily living help are related to low Quality of Life. Social Adjustment, Spirituality and Forgiveness are also the determinants in defining quality of life.

Key Words: Loneliness, Social Adjustment, Quality of life, Spirituality, Forgiveness.

Quality of life (QOL) is a subjective and multidimensional concept that is increasingly being recognized as a useful outcome in health and social care research. The World Health Organization Quality of Life (QOL) group defined quality of life as *"an individual's perception of their position in life in the context of the culture and value*

systems in which they live and in relation to their goals, expectations, standards and concerns". The subjective nature of quality of life purports that it can be conceptualized differently by different groups of people. Age, gender, health status, and cultural factors are some of the important factors that influence their conceptualization.

Social scientist started to use QOL in the 1970s and since then there has been a growing interest in quality of life issues and there are various explanations for this growing interest. One has to do with the growing number of elderly people in society. Higher age often brings about health problems and a decrease in functional capacity. This means that a growing number of people living with chronic diseases, health problems and decreasing capacity. For these patients the goal of health care cannot be freedom from disease. What one can do is to help the patients to live as good a life as possible despite their illnesses and decreasing capacities.

Nearly 25 years ago Schussler and Fisher (1985) published a review of quality of life (QOL) research in sociology. They found that the QOL concept seldom if ever entered into sociological research, even though several of the components of QOL figured prominently. Neither did they find that QOL contributed to the formation of public policy. Now, after 25 years, perhaps scholars should reexamine the presence of QOL in sociology. Quality of Life refers to well-being as indicated by either/or/and subjective indicators and objective indicators.

Previous research literature suggests that the quality of life (QOL) reflects both macro-societal and socio-demographic influences on people and the personal characteristics and concerns of individuals. It can be argued that within societies there is a common core of values, and that their presence or absence influences overall QOL. But as QOL is also subjective, it is equally dependent upon the interpretations and perceptions of the individual (Ziller 1974). As such, the definition and measurement of quality of life should be grounded empirically in lay views, and should reflect individual subjectivity and variation in the concept, whilst at the same time taking account of wider social circumstances. The established models of quality of life

are however rarely multi-level or multi-domain. They range from basic, objective and subjective needs-based approaches, often derived from Maslow's (1954) hierarchy of human needs, to classic models based on psychological wellbeing, happiness, morale and life satisfaction (Andrews and Withey, 1976; Larson, 1978; Andrews, 1986), physical health and functioning (Bowling 2001), social expectations (Calman 1983), and the individual's unique perceptions (O'Boyle 1997). Social gerontologists also focus on the importance of social and personal resources, self-mastery or control over life, autonomy [freedom to determine one's own actions or behaviour] and independence [the ability to act on one's own or for oneself, without being controlled or dependent on anything or anyone else for one's functioning] (Baltes and Baltes 1990).

Reflecting the increasing recognition of the multi-faceted nature of QOL, researchers have gradually shifted the focus towards a more positive view of old age, as a natural component of the life span (O'Boyle 1997) and one which can provide personal fulfilment. It has also promoted recognition of the importance of the individual's perceptions of their life quality (Bowling 1995a, 1995b, 1996; Hickey *et al.,* 1999). As a consequence of the individual nature of quality of life, Joyce *et al.,* (1999) argued that a theory of quality of life must integrate knowledge from other cognitive theories, for example memory and information processing, because changes in an organism reflect either or both immediate effects and storage processes. Thus any stimulus may modify the individual's construction of their quality of life at any of these levels. They argued that the links between the levels may be stable or unstable, healthy or pathological, and represent different 'depths' of quality of life, which may vary in their status as ' traits 'or 'states'; and that health status may be a ' trait ' and general quality of life measures may assess 'states', although such distinctions remain unclear and require further investigation.

The increase in the number of old people is presumably also increasing the number of people with chronic diseases, health problems and decreasing capacity That is disabilities both physical and social. Physical Disability of any kind prevents normal function in instrumental activities of daily living (IADLs) including household

chores, shopping, climbing stairs, public transport, finances, and walking and are affected by cognitive impairment and activities of daily living (ADLs) include personal-care activities such as eating, bathing, dressing, and using the toilet. Today elderly are vulnerable to the social and environmental predictors of disability such as the effects of breaking up of joint family; the impacts of postmodern trends of individualistic attitude along with deteriorating performance based functional capacity and chronic somatic conditions. The prevalence of these disabilities in old age frequently lowers the quality of life whilst straining limited resources for assistance, care and rehabilitation. Disability often has several components; holistically it can be defined as a gap between a person's abilities and environmental requirements. (de Jong-Gierveld, 1987) Impairing physical and mental conditions may result in disability just as cultural factors may produce disability. Prejudices and discrimination in different arenas of daily life may disable and restrict more than impairment and functional limitations.

The development of disability in old age is regarded as a dynamic social phenomenon that relates to physiological, psychological as well as socioeconomic positions causing disabilities. The main pathway to disablement process proceeds from acquisition of physical pathology of ageing leading to functional restrictions that generate the pathologies of social existence. Hence the inabilities to perform instrumental daily chores and functional social roles are the prime disabilities for which they need care givers. Socio-cultural barriers (Nagi, 1991; Verbrugge and Jette 1994; Stuck *et al.,* 1999), amount and quality of social support (social network, contacts, support and services) signify effects of disability. (Everard *et al.,* 2000; Koukouli *et al.,* 2002). These modifiable risk factors stem from life course perspectives and cultural relations prevalent in living conditions of society creating a vulnerable situation making the elderly socially disabled.

Based on the aforesaid theoretical assumptions of quality of life QOL and realizing the relevance and significance of desirable quality of life of elderly people the present author was interested to study the nature of quality of life and some attributes that affecte the quality of life of the elderly and to develop a database for preparation of guidance

for promotion of quality of life of elderly people. With this aim this paper concentrated on the following parameters of objectives.

Objectives

(i) to study the pattern and degree of loneliness among the male and female elderly boarders with physical disability,

(ii) to the study nature of social adjustment among the male and female elderly boarders with physical disability,

(iii) to study nature of forgiveness among the male and female elderly boarders with physical disability,

(iv) to study selected attributes of quality of life (general feeling, social interaction, economic condition and spirituality) among the male and female elderly boarders with physical disability in old age homes of Kolkata.

Variables

Physical disability affects most dimensions of functional ability, that is directly associated with risk of losing mobility, locomotor functions, lower body limitations, upper body limitations, Physical Activities of Daily Living, (ADLs) and Instrumental Activities of Daily Living (IADLs). It increases the need for caregivers and enhances social disability. In turn it hampers social adjustment and features among the most important determinants of diminution in *quality of life*. In this study four components of disabilities (visual disability, hearing disability, speech disability and locomotor disability) as assessed by the elderly were considered as measured variables.

Loneliness is an unpleasant experience that occurs when a person's network of social relationship is deficient in either quality or quantity. The loneliness is recognized as an emotion and includes both physical and psychological conditions such as perceived ill-health, dietary inadequacies, and depression, personality disorders and suicide. The existing models of loneliness focus on social interaction along with physical health and cognitive capacity to explain the increasing likelihood of experiencing loneliness with advancing age (Fees *et al.*, 1999). In this study UCLA's concept of loneliness was considered as measured variable.

Social adjustment refers to those relationships which involve the accommodation of the individual to circumstances in his social environment for the satisfaction of his needs or motives. Both the social and emotional aspects of adjustment were considered as measured variables. An elderly person's Quality of life is the degree of well-being felt by the individual. It consists of two components: physical and psycho-social. The physical aspect pertains mainly to health, the psycho-social aspect includes stress, worry, pleasure and other positive or negative emotional states such as self respect and the respect and interaction with the outside world. In this study the social, economic and spiritual components were considered as indicators of quality of life.

Spirituality is seeing religion and truth objectively. Spirituality is an inherent component of being human, and is subjective, intangible, and multidimensional. Spirituality and religion are often used interchangeably, but the two concepts are different. Spirituality involves humans' search for meaning in life, while religion involves an organized entity with rituals and practices about a higher power or God. Spirituality may be related to religion for certain individuals, but for others, it may not be.

Method

Sample

200 elderly persons (100 men and 100 Women), age varying from 65 to 70 with physical disabilities, (or having some functional impairments) living in ten old age homes (at least for five years) within the jurisdiction of Kolkata. Purposive sampling was used to meet the needs of the study.

Tools used: General information schedule with personal demographics, disabilities and The Information on the Profile of Quality of life (PEQOL), Revised UCLA loneliness scale (RULS), Social Adjustment Scale (1989) and Forgiveness Scale.

The respondents were interviewed individually. Appropriate statistical tests were used in the analysis of data.

Findings and Discussion

Table 1

Percentage of Elderly by Type of Physical Disabilities and Needs for Support

S.No.	Type of Impairment	Females %	Males %	X2
1.	Visual disability	79	69	0.12
2.	Hearing disability	54	67	0.49
3.	Speech disability	54	58	0.00
4.	Locomotor disability	66	62	0.00
	Need Pattern of Support	**Females%**	**Males%**	**X2**
1.	Emotional support	79	49	12.39
2.	Informational support	22	32	0.86
3.	Functional support	72	68	0.00

Table 1 indicates that more than 50 per cent of both male and female elderly were suffering from four disabilities: visual, hearing, speech and loco motor disability. Their demand for support was highest for emotional (females were demanding more than the males) followed by their demand for functional support and informational support. Insignificant chi-square values indicated uniformity in their disabilities as well as demands for support, except for the emotional support where the females demanded more support and that made them vulnerable to the feeling of exclusion.

Table 2

Showing UCLA Loneliness Scale scores of the Respondents

Categories	Mean – M	Standard Deviation-SD	't'	Remarks
Male N=100	38.35	9.39	2.73	Significant at 0.01 level
Female N=100	45.45	6.88		

As higher Mean value in Table 2 indicates more loneliness. It was found that the females were lonelier than the males. The gender differences in family and household work participation, less frequent contact with friends as well as geographical distancing from the family of which they have been an integral part, are factors that have

contributed to the marginalization of the elderly women, forcing them to towards unwilling solitude. (Booth, 1983; Moustakes, 1961).

There is marked gender difference in longevity with disability and women were marked with "multiple jeopardy", a combination of social disadvantage, lesser education and lesser capability of commanding social interaction and care (Hammond 1995). Ageing marginalizes and socially excluded them from mainstream livelihood and participation in family affairs resulting in lack of utilitarian social role, few social contacts as well as absence of mutually rewarding relationships with others resulting in loneliness another form of social disability.

The problem of social isolation causing loneliness among the age group 60 years and above is of growing concern. Elderly people feel socially isolated if they have poor or limited contact with others. It adversely affects the quality of life of elderly. The proponents of disengagement theory contend that psychological mal-adjustment in old age caused by reduced of activity and social contact in old age (Cumming *et al.,* 1960), Researches indicate that engagement in social interaction is far more beneficial for health and wellbeing of older people (Bower 1997; Fratiglioni 2000).

Table 3

Showing Significance of Difference Between Two Groups of Respondents (working and non working elderly women) on UCLA Loneliness Scale scores

Categories	*Mean – M*	*Standard Deviation-SD*	*'t'*	*Remarks*
Working Female N=35	12.35	2.65	2. .08	Significant at 0.05 level
Nonworking Female N=35	16.85	2.87		

The data in table 3 shows that the nonworking females were lonelier (M= 16.85) than the working females (M= 12.35). The female who were earlier working possess better educational background, have few but better contacts and also know how to spend their leisure time through reading books, magazines and religious texts as Indian women are known for their pious and the philanthropic attitude or other kinds of pass time. (Bondevik and Skogstad, 2000).

While the aging process itself forces people to change relationships and roles, it has a diminutive effect on the social role resulting in marginalization impact and diminishing social and economic status.

Table 4

Showing the Mean-M, SD of male and female elderly boarders in Old age Homes of Kolkata on the Social Adjustment Scale scores and the't' values showing significance between the two Means

Categories	*Mean –M*	*Standard Deviation-SD*	*'t'*	*Remarks*
Male N=100	61.60	3.52	11.71	Significant at 0.01 level
Female N=100	41.25	6.93		

As the higher Mean value Table 4 indicates higher lack of social adjustment, the male respondents were less adjusted than their female counter part. The Indian society with its patriarchal social system has always given the male in the household more power and authority in the decision-making right and economic sphere than the female so they feel the impact of diminishing status and social role more.

Indian society had always provided a congenial set of conditions for a physically comfortable and emotionally satisfying old age in the extended family, strong kinship ties and religious values extolling the virtues of old people have, for generations, acted as the natural social security for old people (D'Souza, 1982). This social security of the elderly flowed from their superior status in the family and the elderly parents enjoyed considerable authority and control in family matters, particularly over family property. This ensured dominance in the family, and the children taking care of the ageing parents as an obligation and as a sign of reverence is changing for individualistic existence disabling social security. Social role fulfilment is strongly related to social positioning, thus underlining the significance of socio-economic factors (Lynch, 2000) in the disablement process. Many studies of social position and disability in old age have shown a strong relationship between material resources and functional decline against unfavourable trajectories of change. There is growing evidence that social relationship (social network, contacts, confidants)

importantly affect the ability of older people to over come disabilities of daily life.

Table 5

Showing the Mean-M, SD of 70 elderly females (35 working and 35 non working) boarders in Old age Homes of Kolkata on The Social Adjustment Scale scores and the't' values showing significance between the two Means

Categories	*Mean – M*	*Standard Deviation SD*	*'t'*	*Remarks*
Working Female N=35	69.82	5.32	0.20	Insignificant at 0.05 level
Nonworking Female N=35	69.43	5.63		

The database Table 5 shows that there is no significant difference between the working and nonworking females' boarders of the old age homes, this examined vis-à-vis the activity theory of ageing, states that engaging in activities help the elderly in overcoming loneliness, improves their health and augments self-esteem. The female boarders keep themselves busy by doing some of the household jobs and there they make adjustments with their counter parts both males and females so their adjustment capacity both emotional and social is higher.

Recent findings have established that forgiveness is related to positive mental health and decreased grief. Forgiveness includes behavioral (Pingleton, 1997), affective (Ferch, 1998), cognitive (Al-Mabuk, *et al.*, 1998), and motivational components and is a positive and healthy response that involves a decision to relinquish anger (Pingleton, 1989) and not seek revenge. Forgiveness as an altruistic act or a self-oriented one is also an important motivational change that drives away from revenge and avoidance-motivations to benevolence or good-will that has been described as a largely self-preservational tool for maintaining important relationships (Ashton, *et al.*, 1998), or a means of coping psychologically with a betrayal (Canale, 1990).

Table 6

Showing the Mean-M, SD of male and female elderly boarders in Old age Homes of Kolkata on the Forgiveness Scale scores and the't' values showing significance between the two Means

Categories	*Mean – M*	*Standard Deviation-SD*	*'t'*	*Remarks*
Male N=100	42.70	6.69	11.09	Insignificant ant at 0.01 level
Female N=100	61.00	3.11		

In Table 6 the database highlights that the female boarders were more forgiving than the male counter parts. Forgiveness the process of concluding resentment, indignation or anger as a result of a perceived offense, difference or mistake, and/or ceasing to demand punishment or restitution. These female respondents who were more forgiving were happier and psycho-socially healthier than the males who held resentments for they were able accept their fate. (Mc-Cullough, *et al.*, 2000).

The elderly are seen more and more as individuals with the right to live in a favorable environment, and should take responsibilities throughout their own ageing process. In fact, the abilities of the elderly should be duly acknowledged and encouraged, taking advantage of "their strengths" and their sea of knowledge and experiences. The importance of the institutional environment regarding the quality of the aging process, which is provided to this age segment of the population, should meet the demands and requirements so as to make the aging process easier. It is evident that the physical aspects of this environment are important, but are not solely responsible for the situation.

Quality of life (QOL) is derived from aspects of contemporary social theory as they relate to the ontology of late modernity. In particular, we utilize a model based upon needs satisfaction. The model contains four domains: Control, Autonomy, Pleasure and Self-realization. Quality of life should be grounded empirically in lay views, and should reflect individual subjectivity and variation in the concept, whilst at the same time taking account of wider social circumstances.

Table 7

Showing the Perceived Feelings of the Elderly on Some Major Attributes of Quality of Life of Elderly

	A. General Feelings	*Male N=100 %*	*Female N=100 %*	*X2*
1.	Decision-Making			
	(i) Yes	22	4	7.16
	(ii) No	78	98	
2.	Opinion Respected by Younger Generation			
	(i) Yes	6	34	12.25
	(ii) No	94	66	
3.	Adequately Supported by Children both Socially and Economically.			
	(i) Yes	10	34	10.78
	(ii) No	90	66	
	B. Social Interaction			
4.	Social Interaction and involvement with co mates			
	(i) Yes	88	68	5.38
	(ii) No	12	38	
5.	Contacts with family ties (Children and relatives visit and invite them on social occasions).			
	(i) Often	37	12	4.8
	(ii) Seldom	37	63	
	(iii) Never	26	25	
7.	Participation in social activities in family or friend circle			
	(i) Yes	14	07	8.3
	(ii) No	78	73	
	(iii) Sometimes	8	10	
8.	How often are you consulted for giving opinions about others (son, daughters, grand children, etc.)			
	(i) Always	12	02	30.95
	(ii) Sometimes	24	14	
	(iii) Never	64	84	

Contd...

Contd...

	C. Economic Condition			
9.	You are economically dependent on			
	(i) Pension (self or widow) and Savings	58	46	16.58
	(ii) Children	30	38	
	(iii) Relatives	12	16	
10.	Condition of overall mental and physical health			
	(i) Good	22	28	5.46
	(ii) Average	50	56	
	(iii) Bad	28	16	
D.	Spirituality			
11.	Faith in a divine power			
	(i) Yes	67	92	10.32
	(ii) No	33	8	
12.	When in dilemma resort to introspection and cause searching			
	(i) Yes	58	87	8.92
	(ii) No	42	13	
13.	Do pray and read religious/ethics book to overcome mental instability			
	(i) Yes	63	89	9.98
	(ii) No	37	11	
14.	Does praying to the divine help you take decisions			
	(i) Yes	64	80	5.83
	(ii) No	36	20	
15.	Does introspection give you willpower to face the daily life problems			
	(i) Yes	68	88	5.38
	(ii) No	32	12	

In Table 7 the database highlights that the old age home boarders regardless of gender were unhappy with the kind of life they have to lead and they consider themselves having an unsatisfactory quality of life. That having good social resources that includes role and status was said to be part of having a good quality of life by almost all respondents. Regular face-to-face contact with families was important to

having a good quality of life for 90 per cent respondents. No one said they had 'good relationships' with relatives (i.e., emotionally supportive and loving relationships). These types of relationships enabled the respondents to feel that others cared about them and would always be there for them if they had a problem. Some people, particularly those who were widowed, appreciated the company and emotional supports provided by their co mates or other boarders and were spiritually emancipated. Some respondents simply enjoyed spending time with their comates and seeing them living happy lives together. Others spoke of the importance of having people nearby by that they 'knew' well and who, they felt, could call if they had a problem or needed help. One woman expressed these feelings clearly:

Respondent: I have a daughter who lives about 10 minutes away ... but I do not see her frequently. So I do not have her to hand, as it were, absolutely necessary.

Respondent: "I am absolutely disgusted with my son, he is a henpecked husband, but I think I should not blame her (Daughter-in-law), she is not my child and more over she does not look after her parents too. We (her parents and me) are old fashioned elements to be discarded. My son is also a party to this kind of thought otherwise how could he send me here.

They are not important enough for them to be respected neither do they have importance in the life of the significant other and more over they have very few ties with their family and friends. They belonged to an unproductive minority, marginalized and excluded to lament their longevity and their fate depended upon the interests of the active majority.

One maxim of *role theorists* holds that social actors are but the roles they play. Roles shape the identities of their occupants and shape the orientations of those with whom they interact. Role opportunities, in turn, are shaped by individuals' *social status*, which, in turn, are determined by such factors as age, social position roles, etc. With modernization, statuses have decreasingly been ascribed (e.g., individuals' social coordinates being determined at birth) and increasingly based on merit (e.g. roles). Lost in this new life game plan are the traditional continuities provided by life-long roles. The cost, according to some, has been an evaporating sense of biographical continuity and

comprehensibility, hence since the 1970s, a proliferation of popular and professional literature addressing the perceived discontinuities of the self. Disengagement theorists focus on role loss, claiming that there is a mutual parting of ways between older persons (with diminished ego strength and emotional investments in the broader society) and society (which needs to provide space for younger persons to engage themselves in the positions vacated by the old, and which needs to diminish the social disruptions occasioned by people dying in role).

Almost all indicators of cognitive functioning seem to relate to quality of life as well as loneliness in life showing that imposed exclusion can cause social disability resulting in various other disabilities such as depression. They have collective solitude' and are in danger of imminently becoming individually alone. (Delisle, 2005). Most respondents were spiritual in that they were being resilient enough to cope with excluded existence in these homes were they had comates as company no relatives.

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Depression Among Institutionalised and Non-institutionalised Elderly Widows and Married Women

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ABSTRACT

Recent studies have shown that older women suffer and remain depressed for a longer period of time than men. Depression is characterized by a persistent down mood that does not improve over time and interferes with the normal functions and activities. Depression can be caused due to Psychological, Physical and Environmental factors. Major risk factors for Depression among elderly women include death of spouse or loved one, retirement, chronic illness, lack of social support network, stressful life events, medications, etc. The study aims to find differences in Depression among institutionalised and non institutionalised elderly women with their partner alive and widows. The sample consisted of 60 institutionalised elderly women and 60 non-institutionalised elderly women who were further divided into 30 women with their husband alive and 30 widows in both the groups. Geriatric depression scale consisting of 30 yes/no questions to measure Depression was administered individually. The data thus collected was statistically analyzed using two way ANOVA. Results revealed that Widows had greater depression compared to women

who had their husbands alive. No significant difference emerged between elderly women irrespective of institutionalised or non institutionalised.

Key Words: Depression, Elderly, Institutionalised, Non institutionalised, Widows.

Depression is characterized by a persistent down mood that does not improve over time and interferes with the normal functions and activities. Depression is a serious condition that can impact every area of your life. It can affect your social life, relationships, career, and sense of self-worth and purpose. And for women in particular, depression is common. In fact, according to the National Mental Health Association, about one in every eight women will develop depression at some point during her lifetime. Recent studies have shown that older women suffer and remain depressed for a longer period of time than men. Research shows that the incidence and extent of depression depends on the length of marriage and the quality of that relationship. Women who had longer satisfying marriages were more likely to experience depression than those who had been married for less years, and/or their marital relationship was not as intimate a bond at best or troubled and dysfunctional at worst.

Depression can be caused due to Psychological, Physical and Environmental factors. Major risk factors for Depression among elderly women include death of spouse or loved one, retirement, chronic illness, lack of social support network, stressful life events, medications, hormonal changes, etc.

The symptoms of depression in women are depressed mood, lack of energy and fatigue, Feelings of guilt, hopelessness and worthlessness, Suicidal thoughts or recurrent thoughts of death, Sleep disturbance (sleeping more or sleeping less), Appetite and weight changes, Difficulty concentrating, Loss of interest or pleasure in activities.

Review of Literature

Harlow, *et al.*, (1991) evaluated risk factors for depressive symptomatology prior to bereavement and at 1 and 12 months after bereavement in 136 widows and 409 married controls. Prior Center for Epidemiologic Studies Depression Scale scores were generally a good predictor of subsequent scores; however, shortly after bereavement prior scores proved relatively uninformative as most widows experienced a marked increase in depressive symptomatology. Poor health and limitations in physical activity at baseline were consistently associated with higher levels of symptomatology. Although having more friends was also consistently associated with lower levels of symptomatology, the effect of family size appeared to be time and circumstance specific. These results suggest that women at risk of prolonged depression after the death of their husbands can be identified prior to or at the time of bereavement and that widows have risk factors similar to those of women at risk of depression in the general community.

Study conducted by Mendes *et al.*, (1994) on 1046 elderly subjects, of whom 139 became widowed during follow-up revealed that depression scores increased during the first year of bereavement, but generally returned to pre-widowhood levels thereafter. However, depression scores remained elevated among young-old widows (65–74-year-olds) well after the first year of widowhood. Using cut-off scores, rates of high depressive symptoms remained somewhat elevated over baseline levels. Increases in depression scores during bereavement were not explained by socio-economic variables, health habits and health status. It is concluded that particularly young-old widows are at risk of developing chronic depressive symptomatology during bereavement that may warrant clinical attention.

Gopal *et al.*, (2009) did a descriptive study among elderly population aged above 60 years living in old age homes and in the community. 50 cases from each group were interviewed using a structured questionnaire using GDS (Geriatric Depression Scale) which is widely accepted for assessing the depression among the elderly. Data was analyzed statistically using a t-test for significance. Data was

analyzed by comparing depression status among elderly, living in old age homes and in the community. Age wise, sex wise and occupation wise distribution of depression was also analysed. Depression was found to be more in inmates of old age homes. On sex wise analysis depression was found to be more among females. Occupation wise and age wise analysis proved to be insignificant.

Nalungwe (2009) conducted a qualitative research with a purpose to describe loneliness among elderly widows and its effect on mental well being of the elderly widows during the first year of bereavement, and to describe interventions to alleviate negative feelings of loneliness. A literature review was done conducted on the basis of 47 research articles. The systematic search was conducted only from the reliable internet data base such as CINALHL, Medline, Biomed, Elsevier science direct, Pub med, sage journals and OVID in the field of health care, for recently published research studies in nursing and scientific journals. The data processing was done by content analysis. Findings revealed that loneliness is a particularly relevant issue in relation to elderly widows, whose rates of mortality illness and depression exceed those of their married counterparts, everywoman who loses a husband through death experiences a painful period of bereavement, often accompanied by Severe loneliness, obsessive thoughts of the deceased, restlessness, insomnia, somatic complaints, and even hallucinations of the deceased, and poor mental wellbeing.

Objectives

1. To identify the difference in Depression among institutionalised and non-institutionalised elderly women.
2. To identify the differences in depression among widows and women with their husband alive.

Hypotheses

1. There is no significant difference in Depression among institutionalised and non-institutionalised elderly.
2. There is no significant difference in Depression among widows and women with their husband alive.

Method

Sample

The sample for the present study consisted of 120 elderly from Mangalore and Udupi district of Karnataka. Convenient sampling method was used.

Table 1

Composition of Sample

Groups	*Institution*	*Non-institution*	*Total*
Elderly women with partner alive	30	30	60
Elderly widows	30	30	60
Total	60	60	120

Tool Used

Geriatric Depression Scale (Yesavage, 1982) was Used in to Collect Data

The Scale consists of 30 yes/no questions and is widely used in screening depression among the elderly population.

Scoring

Questions 1, 5, 7, 9, 15, 19, 21, 27, 29 and 30 if marked 'no' gets a score of 1 and questions 2, 3, 4, 6, 8, 10, 11, 12, 13, 14, 16, 17, 18, 20, 22, 23, 24, 25, 26 and 28 if marked 'yes' gets a score 1. Total depression score is obtained by summing the marks of each question.

Reliability and Validity

The validity and reliability of the tool have been supported through both clinical practice and research. In a validation study comparing the long and short forms of the Geriatric Depression scale for self-rating of symptoms of depression, both were successful in differentiating depressed from non-depressed adults with a high correlation of 0.84.

Procedure

To collect data from institutionalised elderly, permission was taken from various old age homes and elderly were personally approached and for the sample of non institutionalised sector elderly residing in their homes were approached. Geriatric Depression scale was administered to the elderly as per the instructions in the manual and were thanked for their co-operation.

Results and Discussion

Table 2

Anova for Depression Among Institutionalised and Non-institutionalised Elderly Women with their Partner Alive and Widows.

Source of Variation	*Sum of Squares*	*DF*	*Mean Squares*	*F*
Domicile	14.008	1	14.008	0.312 NS
Husband alive*Widows	180.075	1	180.075	4.013*
Interaction effect	9.075	1	9.075	0.202 NS
Error	5205.433	116	44.874	
Total	24485.000	120		

*p < .05, NS: Not Significant

Table 2a

Mean, Standard deviation and T Value on Depression among Elderly Women with their Partner Alive and Widows

Groups	*N*	*Mean*	*SD*	*T Value*
Husband alive	60	22.77	6.881	3.72**
Widows	60	27.67	6.423	

**p < .01

The F ratio for domicile is 0.312 which is not significant and the F ratio of 0.202 for interaction also did not reveal a statistically significant difference. Hence the hypothesis that there is no difference in Depression among institutionalised and non institutionalised elderly women with partner alive and widows is accepted. Results of the present study are against the study conducted by Gopal *et al.*, (2009) revealed that depression was found to be more in inmates of old age homes compared to their counterparts.

The F ratio of 4.013 for elderly women with partner alive and widows is significant. Mean for elderly women with partner alive is 22.77 and SD is 6.881. Mean for elderly widows is 27.67 and SD is 6.423. The obtained t value of 3.72 is significant at 0.01 level which indicates that depression is high among widows compared to elderly women with partner alive. The result of the present study is in accordance with the study conducted by Harlow, *et al.,* (1991) suggesting that women are at higher risk of prolonged depression after the death of their husbands. Similar study was also quoted by Nalungwe (2009) that depression exceeded among elderly widows compared to their married counterparts.

Findings

1. Widows have more depression compared to the women with their husband's alive.
2. No significant difference emerged between elderly women irrespective of institutionalised or non-institutionalised.

Scope for Further Study

1. Gender differences in Depression can be studied.
2. Depression in relation to other variables like loneliness, social support, general health, etc., can be studied.

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Aged in India and Canada: The Missing Social Capital

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ABSTRACT

Aged, the internal differentiation and the consequent divergent concerns within the group notwithstanding, has suddenly become a subject of academic and legislative interest of late. However, the over pouring of interest in the old is just short of adequate to camouflage neither the genesis nor the one-sided understanding of the problem. The present paper seeks to explore the alternative ways of looking at the problematic of ageing and propose to bring social capital into the centre of the discourse. The paper is divided into two parts. It begins with an examination of the commonplace assumptions that go into the making of the elderly world. Then it proceeds, in the next part, to an assessment of the endowments and entitlements of the elderly sustained by the State and Society in large within a historical-comparative frame of reference. The conclusion in the paper underscores the necessity to reconsider a social capital approach to the elderly issues and dwells upon the gaps which need to be closed. Without being very indological, it maintains that, Indian society is a relationship based rather than a rule based society. Individual centric and consumption led models of development for the old in particular is not going to work in our society. Policy on the old has to align itself with our traditional ethos of network of trust, mutual help and social capital. The paper

is highly useful in highlighting the problem of the old and is highly useful for policy making and planning.

Key Words: Age Quake, Social Economy, Withdrawal of State, Defined Benefit Scheme, Old Age Security, Disengagement, Social Capital.

The problematic of ageing in India has been in a state of undue neglect for a very long time. It has been passed on by policy makers as a general problem of economic development or lack of it. It has been a commonplace assumption that as the national economy grows in size, the problem of the aged will automatically be taken care of. The problem of the aged, to the contrary, has proportionately grown along with economic boom. Similarly mass media, in its aggressive pursuit of sensation has largely ignored the aged. Baring few crime stories that have high selling value, print as well as electronics media remains silent on the state of the aged. Social scientists have kept themselves away from the less fashionable old people. Either the aged are assumed to be family liability or they have been seen as sacred cows not to be subjected to critical examination. Demographers have discounted the significance of ageing till very lately. With their obsession with size it is but natural that they have no place for the statistically insignificant aged people in the population.

Ageing has never been a problem in traditional Indian society. Historically, growing up has been a symbol of grace and dignity. Old people had been on the social agenda since ancient times within a framework of social economy where economic needs of the old remained a moral responsibility of family, kin and community. This perhaps partly explains the State apathy to the Old in our modern times today. As the processes of change in the direction of a modern and competitive society are gaining momentum, the older people are fast losing their traditional security and support. While policy makers have been slow in realizing and responding to the problem, the process of globalisation has magnified the challenge. It is no more a secret that the inevitable process of globalisation, as opposed a world or a mere international order, is far from having positive consequence for the poorer nations and poor within a nation. Old people, being a looser in a competitive society and living with withdrawal of State protection

find themselves at the receiving end. The present paper is a sociological narrative on what it means to be an old in India with reference to the structure of State response and the paper seeks to interrogate the very theoretical and value choices that underlies the state of the aged in India.

The paper is divided into two parts. It begins with an examination of the commonplace assumptions that go into the making of the elderly world. Then it proceeds, in the next part, to an assessment of the endowments and entitlements of the elderly sustained by the State and Society in large within a historical frame of reference. The conclusion in the paper underscores the necessity to reconsider a social capital approach to the elderly issues and dwells upon the gaps which need to be closed. The paper is highly useful in highlighting the problem of the old and is highly useful for policy making and planning.

Contending Perspective on Ageing

Theoretical paradigms have strong bearing not only on the meaning of a problematic but also the manner in which efforts are directed to resolve it. Any discussion on the old in India is incomplete without a reference to the ancient Ashram theory which is a strong determinant of our society and culture. Ashram theory divided the social life of man into four ashrams from among which Vanaprastha and Sanyasa directly deal with what we conventionally call 'old age'. Ashram scheme of life is based on two assumptions. It assumes, first, that all the ashrams are of equal importance, i.e., old people are integral part of collective life in society and not outside it. Secondly it assumes that old, like the young or even more than them, actively contribute to social growth. Old people gather wisdom in their life processes and society need their wisdom and knowledge for progress.[1] Thus like Gerotranscendence, old age is a progress towards a metaperspective of cosmic and transcendent and unlike disengagement it emphasize that old people are at the center of social life. Society needs old people more than the old need society. Disengagement theory emphasizes the irreversible separation between the individual and society with the advancement of age. An ageing person tends to disengage himself from social roles and activities. Society also tend to

resent doing business with the aged.[2] Disengagement theory (Cumming and Henry, 1961) claims that successful ageing is achieved through abandoning social roles and relationships thereby reducing activities and involvement. Based on his own study and of others namely Jung, Erikson, Krammer and Woodroff, etc. Tornstam (2005) developed the theory of Gerotranscendence. The theory regards Gerotranscendence as the final stage of a natural progression to higher consciousness leading to transformation of self-consciousness, relationship with others and the understanding of fundamental existential issues. Two more theories on old age namely Activity theory and Continuity theory deserve attention here. Activity theory had its origin in the writings of Havighurst (1948/1972). Havighurst & Alorecht (1953) elaborated on culturally relevant developmental tasks through out a six fold age periods in life. The whole life span of an individual is divided into six stages and each stage is characterised by its appropriate tasks and values. Activity theory postulates that self-worth and wellbeing during old age depend on active involvement in these life tasks and in new more meaningful tasks if possible. Continuity theory as given by Atchley, (1999) emphasizes that old people face varieties of conflicts in their effort to cope with changes that come with ageing process. In the process of growing up they acquire a structured set of habits, preferences and predispositions which become integral part of their self. During old age also the same self seek expression by being connected and continuing with past habits and value choices on the one hand and by making effort to maintain old social relationship, roles and environment. The wellbeing of the elderly depends on the extent to which they can achieve this continuity with their past. There are even greater varieties of approaches to understanding old age than the ones discussed above.[3] There is for example, Modernization theory (Cowgill and Homes, 1972), Labeling Theory (Kuypers&Bengston, 1973) and Theory of subculture (Arnold & Warren, 1965). Modernization theory seeks to explain the elderly problem in terms of modern demands for the young and abandonment of the old. Modern societies abandon their older people economically, socially and culturally more than did the pre-industrial and industrial social order (Baum & Baum, 1980). Labeling theory seeks to understand the old in terms of a new label that results in the creation of a

new set of identities, positions and roles. Like a labeled individual, the aged individual once labeled 'old' comes relate to others and is treated and perceived by others differently. Subculture Theory sees the old as a distinct sub-cultural group in terms of organisation, interests and action. All these approaches render the understanding of the ageing phenomenon even more problematic. It is also important to consider the extent to which the theoretical frameworks are independent or dependent on the socio-cultural context under consideration. In fact all the theories, being social, are tied to their context, i.e., the problem to which they are oriented, in different degrees. Whether old age is disengagement or engaging in meaningful activities or an urge for continuity with the past, the extent of successful ageing in each of the theoretical tradition is connected with social history and political economy of a society in which they are being applied. Therefore it is worthy to examine the context and the paradigmatic choices in India and the structure of old age care contingent upon these choices in the following section.

Living the Age Quake

India is now an ageing nation. The United Nations Organisation defines a country as 'ageing' where the proportion of people over 60 reaches 7 per cent. As per Census 2001, the population of older persons is 7.6. Crore and is projected to increase to 11.29 crore in 2016 and to 19.8 crore in 2030 (As shown in Table 1). In recent years the country has seen an increasing graying of its population and is now home to second largest population of elderly people in the world. This has been caused by an increase in life expectancy at birth, improved medical facilities, nutrition and better quality of life. The progress on all these fronts has been a cause of alarm for the global community in the context of spiraling food prices all over the world (The Hindu, Sunday, May 4 2008). More people now live longer than at the time of independence. Average life expectancy being 32 years in 1947, it is now 64 years for males and 67 years for females in 2006 (Ministry by finance). As a consequence the size of elderly population has touched 75 million in 2006. This might not be as alarming as compared to the percentage of elderly population in countries of Asia, Europe and America (U.S. Bureau of Census, 2000). It is no denying the fact that in terms of size, India happens to be the country with second largest

elderly population in the world. This increase in the size of elderly population has recently pushed the debate on old age care to the fore.

Table 1

Percentage Distribution of Projected Population by Age (2001–2026)

Age-Group	*2001*	*2006*	*2011*	*2016*	*2021*	*2026*
0–14	35.4	32.1	29.1	26.8	25.1	23.4
15–59	57.7	60.4	62.6	63.9	64.2	64.3
60+	6.9	7.5	8.3	9.3	10.7	12.4

Source: Census of India 2001; Population Projections for India and States 2001–2026. (Revised December 2006); Report of the Technical group on population projections constituted by the National Commission on population May 2006 Office of the registrar general and Census Commissioner, India.

Indian culture, like many other Asian cultures, emphasized filial piety. Parents were to be honoured as gods. It was considered the duty of a son to respect and care for his parents. Even today, in India, old parents live with son/s and their families. Living with the eldest son and his family is the most common living arrangement. Indian society is patriarchal and after marriage sons bring their wives to the parental household to live. This tradition assured that old people would have younger in-laws and grandchildren to care for them. Also, caste and kin group exerted pressure on younger members to obey and respect the elders. Ageing has historically been seen as appositive status and care of the old squarely lies with the young in the family. It is important to emphasize here that the institution of joint family has always provided the social, economic and ethical basis of old age care in India. Convention and world view are not the only ways of protecting the old. The welfare of the aged is enshrined in the Constitution of India. Article 41 of the Directive Principles of State Policy provides that the 'State shall make provisions for securing the right to work, to education and to public assistance in case of unemployment, old age, etc., within its limits of economic development and capacity'. Laws of the land also warrant old care by the young in the family. Hindu Personal Law (Section 20(1) and 20(3) in Chapter III provides that a Hindu is duty bound to care for his old or infirm parents. Code of Criminal Procedure (Section 125(1) and 125(3) in Chapters IX

provides for imprisonment in case of neglect or refusal to maintenance of parents.

Some of the other important laws that impinge directly on the welfare of the old are Gratuity Act 1972, Employees Provident Funds and Miscellaneous provisions Act 1952 covering the schemes of Provident Fund (1952), Employees Deposit Linked Insurance (1976), Employee's Pension 1995, (Ministry of Labour GOI, 2005–2006). While pension has traditionally been a 'defined benefit scheme' paid from current state revenue, now it has become a 'defined contribution scheme' between the employee and the employer, i.e., the Government since 01.01.2004. There are also voluntary schemes like Public Provident Fund (1968) and group superannuation and Individual Annuity Plans offered by LICs. While all these are for non-government salaried, self employed and Government employees a National social assistance Programme has been started from Aug. 15 1995 a major component of which has been Old Age Pension (OAP).

Policy initiatives, India, have been late to come by. A ground breaking initiative was taken in as late as 1999 in the form of National Policy for Older Persons (NPOP). Other institutions designed specifically to deal with the problem of the old are National Council for Older Persons under the Chairmanship of Minister for Social Justice and Empowerment and the inter-ministerial committee headed by Secretary, Ministry of Social justice and Empowerment. Ministry of Social justice and Empowerment is the nodal ministry to implement the policies and programmes for welfare of the old. The State response to old age problems is structured around this institutional framework. Some of the more visible and need based initiatives by different Government ministries warrants a discussion here. The intention is not to list out the old age concerns of all the Ministries but rather to selectively abstract those important measures that have made some difference in everyday life of the old. An assessment of these initiatives is reserved for the conclusion part. Ministry of social justice and empowerment implements two schemes for the old. Under its 'Assistance to voluntary Organisations for programmes related to the welfare of the aged' which was later revised as ' Integrated Programme for Older Persons', the ministry provides financial assistance up to 90 per cent of the project cost to NGOs for construction of old age

homes, day care centres, mobile Medicare units, etc. There is also another scheme to assist PRIs/SHGs with a onetime construction grant for old age homes and multi service centres. Old people are given higher income tax rebate up to an income of 2.25 lakhs per annum (as per provisions of budget 2008–09). A senior citizen savings scheme has been introduced by the finance ministry that provide higher rate of interest (9% and payable on a quarterly basis) on deposits in post offices as well in public sector banks. Some of the banks like State Bank of India give up to 50 per cent discount on user fee/late fee charges. State Road Transport corporation buses provide reserved seats for older persons. Old people are provided with separate queues for registration and clinical examination in government. run hospitals. Indian railways provide for separate queues to purchase/book tickets by the old and a 30 per cent senior citizen fare concession. Indian Airlines and Air India provide senior citizen discount up to 50 per cent of fare. Two more far reaching programmes that attest some seriousness on the part of the Government to work for welfare of the old are Antodaya Scheme and Annapoorna scheme by Ministry of Rural Development. Under Antodaya Scheme, BPL families with old persons (age > or = 60 years) get 35 kg of heavily subsidised food grains. Annapoorna scheme provide 10 kg of food grain free of cost every month to old people not covered under Old Age Pension Scheme (Irudurya Rajan, *et al.*). The Annual Action Plan for the old (2005–06) also provide for many innovative and timely initiatives for old age care. It urges, from among many other things, to frame a State policy on ageing and emphasize on the need to promote research, training and documentation in the field of ageing. A recent development in 2007 has been the introduction of 'The maintenance and welfare of parents and senior citizens Bill', which proposes to squarely fix the responsibility on sons, daughter, and/or grandsons and daughters, of meeting the housing, clothing, medical needs of the elderly.

A brief note on Canadian ageing scenario will be very useful here. Canada is one of the few countries which is experiencing an ageing boom. In 1998, about 3.7 million Canadians, or 12.3 per cent of the population, were 65 years of age or over. This represents an increase of one million seniors in the population over the past decade. However,

the dramatic growth in the number and proportion of seniors lies just ahead, in the first four decades beyond 1999. According to estimates by The Division of Ageing and Seniors, Health Canada, by the time baby boomers begin to turn 65 in 2016, there will be 6 million seniors, or 16 per cent of the population. By 2020, there will be as many seniors in the population as children (19%). By 2041, their numbers will have grown to 10 million, comprising 22.6 per cent of Canada's Population. The overall ageing scenario in Canada has gone through sweeping changes. The present day seniors are unlike their past counter parts. It is reasonable to believe that, with their higher education level, seniors will have a better knowledge of programmes and services, that they will be more open to health promotion messages, more inclined to participate in educational, political and voluntary activities, and more likely to demand their rights. They will be accustomed to keeping their work skills up-to-date, and will find it easier to remain in the labour market if they wish to and make (NDCA, 1999). Not only the present day seniors are qualitatively different, but also the composition of the Canadian seniors is entirely different due to immigration and the presence of aboriginals adding to ethno-linguistic diversity. All these changes has given rise to a talk of 'third age', i.e., an age in which retirees who are healthy and independent, and are capable of living their dreams hitherto deferred. There comes a 'fourth age' afterwards which is more associated with disability and dependence.

Canadian experience of tackling the issues pertaining to the old is probably one of the best models world over in terms of coverage and understanding. Canada seems to be a good place to grow older. Canadian seniors are no less wealthy and healthier than the young which at times even fuel debates on issues like mandatory retirement, tax credits, age based pension system, etc. Canadians have always believed that the seniors need to be independent and autonomous to live a fulfilling life. This has also been reflected in the Principles of National Framework on Ageing: A Policy Guide, 1996. The Policy guide talks of five principles of policy making for the old namely, Dignity, Independence, Participation, Fairness and Security. There has been a consistent emphasis on research and distribution of knowledge on issues related to seniors. The establishment of National Advisory Council on Ageing, in 1980, for knowledge generation and

advising the Minister of Health on ageing issues, was a landmark event in this regard. Issues of ageing are also thoroughly researched in various reports of different federal government departments.

Canada has provided one of the best possible policy environments for the aged. Canadian commitment for the aged rests on a comprehensive Retirement Income System which consist of Old Age Security, Guaranteed Income Supplement, Canada Pension Plan and Quebec Pension Plan, Private Pension and savings, registered retirement savings plans, etc. Old Age security is Canada's largest generalised public pension programme under which anyone is entitled to a modest monthly taxable pension if he/she is above 65 years and is a resident of Canada for more than 10 years. A person living for 40 years or more gets full pension or 1/40th of full pension for each year of stay in Canada. Pension under OAS is paid from general tax revenue. There is also Guaranteed Income Supplement and allowance. The Guaranteed Income Supplement (GIS) is an additional monthly benefit for low-income OAS pensioners. The Allowance provides a monthly benefit to low-income people between the ages of 60 and 64. It is available to the spouses or common-law partners of OAS pensioners and survivors to help bridge the gap until they become entitled to receive OAS at 65. Canadian Pension Plan which also doubles up as an insurance plan also provides a monthly retirement pension to all who have contributed to CPP Like New Pension scheme in India. Established in 1965, CPP is a jointly managed federal-provincial plan. Almost everyone who participates in the paid labour force in Canada contributes to the Canada Pension Plan (CPP) or to its sister plan, the Quebec Pension Plan (QPP). In 2005, the maximum CPP retirement pension is $828.75 per month if taken at the age of 65. Besides OAS and CPP there are Registered Pension Plans (RRPs) and Registered Retirement Savings Plans (RRSPs) for those who are employed in the private sector or not having any employer plan or are self-employed. Nearly 40 per cent of the Canadians are covered under registered pension plans provided by private employers. The Government of Canada provides tax assistance on savings in Registered Pension Plans (RPPs) and RRSPs and the return from these plans are tax exempted. Retirement income of the old in canada also has multiple investment options that carries different tax

treatment by the Canadian Government. These include Canada Savings Bond and Canada Premium Bonds, government bonds, Term deposits and guaranteed investment certificates, segregated funds, stocks, etc. Thus we see the safety net for the old in Canada is multi-layered and consist of generalised pension guarateeing a bare minimum and targeted pension and investment which is optional.

The Missing Social Capital

The aged in our society has become a problematic in the contemporary times. State machinery has been grappling with these vulnerable and disabled sections of society by protecting their consumption rights and providing a minimum of income security through making different concessions, subsidies and limited direct income transfer. As the individualized State support has come to replace the crumbling family support system for the old, the old, in contrast to their traditional reverence, has come to acquire the label of welfare beneficiaries. We will deal first with the adequacy of the measures taken by the State for the old, both in India and Canada. Then we will engage with the very misplaced philosophy on which the whole State old age care architecture is based.

Canada has one of the best policy frameworks for the welfare of the old. The health of Canadian old is insured through acts. The multi layered safety nets in the form of universal retirement income system and the special provisions for persons below the low income cut off (LICO) sufficiently guarantees an independent and just life during old age. However there are areas of concern which demand urgent attention. Though the intergenerational income gap is not appalling, the disparity within a generation being dependent on their economic standing during active years, needs urgent balancing act. While 17 per cent of seniors had income below LICO in 1997, significant pockets of poverty remained among the seniors namely unattached/divorced and never married. In 1997 49 per cent of the unattached senior women and 33 per cent of senior men had below LICO income (NACA, 2000). Old Age Securities, by design, not enough to meet all the needs. While the old depend on pension plans in old age, only 40 per cent Canadian seniors subscribe to any employer sponsored pension plans and low income 'boomers' contribute less to Registered Retirement

Savings Plan than their richer counterparts. Another concern is that of increasing share of females in the aged population. While 58 per cent Canadian senors are women, 70 per cent 85+ seniors are women. Women being unequal in labour force participation and economic status, are disproportionately affected by old age disabilities. Average income of married senior man is likely to be double that of senior married women. In 1995, 1 per cent of senior men reported that that they had never had paid employment as compared to 21 per cent senior women (Ibid.). Canada also having an ethno-culturally diverse population needs to take into account these in designing policy for the old. The challenge of financial burden is also growing because of growing size of Canadian seniors. The characteristics response has been, since 70s, community based care, home care and informal family care for the old. Community based care is not insured by any act, thereby making it ad hoc and discontinuous. Home care has been so far has remained at the mercy of provincial dole outs. Informal home care is also becoming increasingly difficult for the young in the family. There are issues of time availability and alternative opportunity cost. Policy frame work is yet to accommodate the care of the seniors as in the case of child care benefits available to the working young in the family. Community and family support network reduces many of the risks associated with old age. Social isolation and exclusion due to ageism and racism substantially increase the risk of poor health and loneliness and may even act as predictors of death (WHO, 2003). Thus what is needed today is a revisit to the social capital approach and male space for it in the policy framework for the seniors.

Coming back to Indian situation, one of the mainstays of old age protection in India has been the post retirement benefits in the form of gratuity, provident fund and pension accruing to government and non-government employees.[4] But post retirement benefit is for those who have a job to retire from. As per 2001 census, 311 million workers in a total of 403 million work forces are in rural areas who are agricultural, agricultural related or self employed workers and who are without any post retirement protection or do not retire at all. Same has also been reiterated by OASIS (2000). This report says that 90 per cent of our workforce is not covered by any social security. Casual/contractual workers and the self employed are the bulk of

work force who suffers old age income insecurity. According to an estimate of the Help Age India, 90 per cent of the older persons are from the unorganized sector, with no social security cover. As per the 1991 Census 78.3 per cent of the elderly workforce (females 84.4%) were engaged in agricultural activities. Not only this, 30 per cent of the older persons live below the poverty line and the other 33 per cent just marginally above it. As much as 73 per cent of elderly are illiterate and can only be engaged in physical labour. 55 per cent of the women over 60 are widows, many of them with no support whatsoever. Besides poor coverage, pension liabilities of the Centre as well as states has come to be seen as an economic burden especially since the beginning of economic restructuring and urgency of reducing fiscal deficit. Contributory pension schemes have been the order of the day since 2004.

While the workers in the organised sector are covered by some social security and public assistance, the cultivators, agricultural labourers and the self-employed who constitute the bulk of the aged in India are without any effective old age security, income and otherwise. Some states like Kerala, Tamilnadu, Andhra Pradesh and Gujarat have special pension scheme for agricultural labourers. However even these pension schemes are very negligible in coverage. Majority of workers in the unorganised sector are pension illiterate. The national old age pension scheme (NOAPS) for the destitute old is inadequate in coverage as well as security. The coverage is limited due to resource constraint. For example against a target of 8.71 million beneficiaries for old age pension in 1999–2000, only about 5 million beneficiaries were provided assistance from central funds. The scale of assistance is too small to cater the need of the aged. Moreover the old age pension schemes in most of the states are ad hoc and discontinuous. According to a World Bank report (April 5, 2001) only 0.08 per cent of GDP is spent on old age security in India. (Rajgopal, 2004) Contrary to claims, the benefits do not reach the poor, identification of beneficiaries frequently distorted and the process is vitiated by corruption and favouritism. Similarly Annapoorna scheme launched from April 2000 has also been equally ineffective in achieving its purported objectives of covering 20 per cent persons eligible for NOAPS by providing 10

kg free food grains per month. Some States (Haryana, Karnataka, Tamilnandu) refused to implement it. During 2000–01, only 1900 metric tons of food grains was lifted by ten states. As against an allocation of 99.05 crores in 2000–01 actual expenditure was only 17.44 crore. Similarly in 2001–02 against a targeted coverage of 1.34 million persons the actual coverage was only 203,000-a mere 15 per cent of the target (GOI). Prime Minister Manmohan Singh has just launched (Monday, 19 November 2007) a revised pension 'demand-driven' scheme called Indira Gandhi National Old Age Pension Scheme, which seeks to provide Rs 400 per month pension to identified beneficiaries. The amount to be shared equally by the States and the Centre. Less than half of the States (11 out of 28) has agreed to provide the matching grant for OAP. The inadequacy of old age home scheme, which is directly related to old age care, warrants a mention here. Old age homes are mismanaged with inadequate facilities. Life satisfaction in old age homes is very low (Leibig & I. Ragan, 2003). Though there is effort to ensure at least one OAH in every district , still the number of old age homes will remain inadequate to care all the old in the country. The importance of the institutional care especially for the poor and destitute aged is underestimated even at the policy level. At present most of the institutional care in the form of Old Age Homes (OAH) is provided through Voluntary Organisations. There are 1018 Old Age Homes in India today under the scheme Integrated Programme for Older Persons, 118 OAHs being exclusively for women and the highest number being in Andhra Pradesh. The membership rules of these homes impose different types of eligibility conditions. Except for few, most of the homes are not only over crowded, offer poor facilities, and are often mismanaged. 'our experiences with the governmental policies and programmes aimed at ameliorating the conditions of such target group as children, women, old and tribe offer telling stories of mismanagement and dysfunctions. Given the diversities and inequalities of various types found in our country we may very well doubt the efficacy of any holistic engineering enterprise (Somayajia, 2006). While fully recognizing the importance of the role that the Civil Society might perform in the growth of the institution based well-being of the aged, it has to be admitted that at this stage its

presence is not of much consequence. The NGOs' role is mostly limited to a small agency function in the implementation of the government schemes, such as manning of the old age homes, etc.

Some words on other programmes under the national policy for the older persons. Majority of our aged (78%) live in the rural areas, more than the rural share of their population; even there is a reverse movement of elderly from urban to rural areas (Chakravarty, 2004). Most of the programmes, except few under Ministry of Rural Development, are explicitly biased towards the urban aged and therefore are of cosmetic value. How many of our aged are consumers to services provided by railways or Air India? How many of them have a taxable income to avail income tax rebate? It is time to stand up and face these questions. Even among the aged there are more females than males who have a higher life expectancy of 67 years (2001 census). Being female also means higher degree of dependency. Programmes for the old by different Ministries and Departments are largely blind to this feminisation of the aged world. Another aspect, shared by all the programmes in common, is that they are more protectional than promotional. It sees the old as disables and seeks to protect the consumer rights of the old in the market for different government services through subsidy, concession and waiver. Promotion of healthy ageing is not for the Indian aged. Being old is being disable; it can not be differently able.

While the pensioners among the aged, though very small, are surely better off having access to most of the old age security, the challenge remains with the aged in the informal sector. The thought of a generalised social security and pension system for the old sounds too ambitious, given the financial health of our Central as well as State Governments. We have not, at the same time, even thought of implementation of any kind of informal sector pension schemes like the one run by SEWA Bank which seeks to provide pension benefits to the self-employed like head load carriers, cart pullers, beedi rollers, etc., in rural as well as urban areas (R. Vaidyanathan, 2006). We can think of grafting similar kind of voluntary pension providers drawn from NGOs, SHGs or even local money lender or what has come to be known as Accredited Loan Providers.

Some Observations

Policies and programmes built on misplaced assumptions are bound to fail. Some of our common understanding or misunderstanding about our aged is that these are a bunch of spent force; that they are physically disabled and are therefore dependent on others for their physical, social and economic needs. Traditionally family, kith and kin and other networks of relationship were taking care of the old. But all these groups are growing indifferent to the plight of the old due to modernism, consumerism, individualism and decline of traditional values. This is evident not only in India but also Canada. Government has moved in with rules to protect the interest of the old in private as well as public places. The form that public provisioning has taken is predominantly identical with *sarkari* doles (Charity contribution). This warrants a reexamination of social capital as a policy option. Social capital refers to the network of people and their relation to others around them (John & Chadha, 2003).

The inherent logic of materialism pervades our understanding of the aged. The old is a body, albeit decaying disembodied from its soul. The traditional wise old man is lost somewhere in the market. The physical takes over the spiritual. Therefore the old has come to be seen as bodies who are solitary consumers in a competitive market. Without being seen as conservative or turning indological, it can be said that such understanding of aged is in conflict with our traditional ethos. In fact we live in a kind society which is based on kinship ties the most important of them being the family. Public provisioning for the old are found to ignore this important source of old age problem. Some western thinkers have led us to decry our affective ties in family and society. We are a relationship based rather than a rule based society. Individual centric and consumption led models of development for the old in particular is not going to work in our society. The national policy on the old does not help by not doing anything to rediscover the strength of network of social relationship in tackling the issue of old age care. Probably the Maintenance and Welfare of Parents and Senior Citizens Bill, 2007 that seeks to fix the responsibility of old age care on the family is a beginning in the right direction. We are, no matter how modern we are and if we take a position that Dharma is always opposed to tradition, very conscious of our Dharma

or the duty more than of our rights. Policies and programmes for the old can, instead of out rightly rejecting the network of social relationship based on Dharma, can in fact build upon the available cultural capital of Dharma consciousness towards the old in society. Rational legal rules and traditional relationship should be made complimentary in tackling old age care, because we are a relation driven society trying to cope with a rule driven society. Family values and samajik sanskaras (moral discipline) need to be resurrected by, example, bringing in the popularity Indina the traditional values of cult figures like Sai Baba, Mata Amritanandmayi, etc., to bear upon the issue of old age care. A case in point is that of old age homes. Old age homes are not new in India, the name might be. We had hundreds of 'Vridhashrams' mushrooming around pilgrimage centres where the old come to spend last part of their life. Modern old age homes can be designed to replicate the virtues of Vridhashrams where renunciation and not competitive consumption and acquisition used to be the rule. Also we have a tradition of giving. Private players and can be encouraged to build on liberal charity from people for the old to build old age homes near pilgrimage centres. Values are not antithetical to modernity. Gadgets and malls do not make a nation; values and culture make.

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Living Arrangements of Elderly in India: A Comparative Study of Uttar Pradesh and Kerala

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ABSTRACT

There is high growth of elderly in the total population in the globe and it is also true for India as well. The increasing number of elderly will have some of the socio-economic implications such as health care facility, social security measure, adjustment, dependency, elderly care, living arrangements, etc. However, little is known about the living arrangements of a growing number of elderly in India. It is expected and common belief that they are well cared by their children with whom they tend to co reside. Living arrangement of the elderly has great importance to understand elderly status and wellbeing. In this paper an attempt has been made to look into the living arrangements patterns of the elderly and their determinants by considering two states in India namely Uttar Pradesh and Kerala. The major data source for this paper is, from the census of India and NSS (National Sample Survey) 60th round have been used. In total there are 34,831 elderly (age 60 years and above) persons were interviewed in the 60th round of the survey, of which 4,715 and 1,766 elderly persons are from the state of Uttar Pradesh and Kerala respectively. Both bi-variate and multi-variate statistical techniques have been used for data analysis. From the analysis it is found the high proportions of elderly are in co residence. Mostly the co residence is with spouse

and other members (47.2%) or without spouse but with children (32.6%). However, there is significant proportions (16%) of elderly are either living alone or with spouse only. It is interesting to find the living arrangements of elderly which is broadly based on the background characteristics of the elderly. The living arrangements of elderly are varies with age, gender, marital status, number of surviving children, level of education, occupation and economic dependency. From the logistic regression analysis it is found that those elderly are male, having surviving children and economically dependent on others are more likely to live with family in comparison to their counter parts female, not having children and economically not dependent on others. There is no significant difference in living arrangements of elderly in Uttar Pradesh and Kerala. This study brought out suitable policy and suggestions for strengthening the welfare of the elderly through their living arrangements.

Key Words : Living arrangements, Gender differences, Background characteristics, Utter Pradesh , Kerala

Ageing is the consequence of demographic transition which is nothing but changing from high fertility and mortality to low fertility and mortality. This phenomenon is more evident in developed countries but recently it has been seen that more number of elderly are also increasing in developing countries. Though it is a success story of surviving more number of years in the mean time it has greater socio economic implications. In this paper mostly we are talking of demographic ageing which is nothing but the number and proportions of elderly (60 years and above) in the total population which is increasing. The increasing number of elderly will have socio-economic implications such as health care needs, social security measure, adjustment, dependency, elderly care, living arrangements, etc. However, its implications are more serious for the developing countries as most of the developing countries including India, lack extra familial welfare institutions and social protection schemes to address the problems of aged (Sekher, 2005). In the traditional society elderly person was mostly taken-care in the family, especially by children. But in the changing society which is characterized with urbanization, industrialization and migration the survival of elderly

becoming a challenge. In this scenario, an attempt has been made to look into the socio-economic implications of ageing with particular focus on the living arrangements of elderly. It will be of interesting to see the difference in living arrangements pattern among elderly by considering two states in India namely Uttar Pradesh and Kerala. One state (Kerala) is already reached the demographic transition whereas other state (Uttar Pradesh) is yet to reach the transition.

Elderly in Uttar Pradesh and Kerala

Table 1 presents the proportions of elderly (60+) in India, Uttar Pradesh and Kerala since 1961 to 2001. It is surprising to see the proportions of elderly in Uttar Pradesh in 1961 to 2001. From the table it is clearly shown that the proportions of elderly in Uttar Pradesh was significantly high (6.3%) in 1961. However, over the period there is no significant change in proportions of elderly in Uttar Pradesh. Whereas, in 1961 the proportion of elderly in Kerala was only 5.8 per cent and over the period the proportion of elderly reached to 10 per cent in 2001. This might be possible because over the period Kerala has achieved significant improvement in social indicators including reduction of fertility, mortality, infant mortality rate, maternal mortality rate, child mortality, increased literacy rate and life expectancy (Gulati, 1993). However, for the state of Uttar Pradesh there is no significant improvement in social indicators over the period since 1961 to 2001. Till today in Uttar Pradesh there is high proportions of fertility, mortality, infant mortality, maternal mortality, child mortality, low literacy, and low life expectancy. Because of this there is no significant change in proportions of elderly in the state of Uttar Pradesh.

Table 1

Proportions of Elderly (60+) in India, Uttar Pradesh and Kerala, 1961-2001.

Year	*Uttar Pradesh (%)*	*Kerala (%)*	*India (%)*
1961	6.3	5.8	5.6
1971	6.7	6.2	6.0
1981	6.8	7.5	6.5
1991	6.8	8.8	6.8
2001	6.8	10.0	7.7

Sources: Census of India (various years).

Literature Review

As in this paper the major focus is to look into demographic and socio-economic implications of ageing and in particular the living arrangements. The literature review is based on

- Demographic background and living arrangements
- Socio-economic aspects and living arrangements
- Cultural aspects and living arrangements

A plethora of research studies have been documented on the living arrangements of older persons in developed countries largely because population aging is already advanced in those countries. In the developing world, analysts interested in population aging have focused attention primarily in Asia and Latin America. In their study, Asis *et al.* (1995) found that co-residence of elderly persons with one of their adult children is prevalent in developing countries because of the negative correlation between levels of kin co-residence and socio-economic development. It should be noted that there is mutual benefit derivable from kin co-residence. Other studies on household size and composition, as well as patterns of living arrangements and their socio-economic determinants with reference to the elderly persons in developing countries, include those of Cameroon (2000); Palloni *et al*. (1999); Knodel and Chayovan (1997); Chen (1996); and Martin (1989). These studies reach the common conclusion that elderly persons prefer to co-reside with their kin, especially with their spouse and children, and that elderly females are less likely than their male counter parts to live with a spouse.

Living arrangements are influenced by a variety of factors, including marital status, financial well-being, health status, and family size and structure, as well as cultural traditions such as kinship patterns, the value placed on living independently or with family members, the availability of social services and social support, and the physical features of housing stock and local communities. In turn, living arrangements of elderly affect life satisfaction, health, and most importantly for those living in the community, or institution. Not only this, the living arrangements are dynamic; they change over the life course, adapting to changing life circumstances (Velkoff, 2001).

The living arrangements for the aged persons are often considered as the basic indicator of the care and support provided by the family (Martin, 1989). In particular to Indian culture especially the social system puts pressure on the children, and the sons to take care of the aged parents. It is not that the elderly are only the receivers of care and support. The cultural practices also assign certain duties for the aged in the household chores. Taking care of the young children, looking after the societal responsibilities, settling inter-personal or inter-household or even inter-group conflicts, helping in the matrimonial match-making, are among the duties that the society expects the aged persons to take interest in and attend to. Thus, the aged are made to play useful roles in the household and in the society so as to make them feel reassured that they are an important part of the society.

The elderly population faces a number of problems and adjusts to them in varying degrees. These problems range from an absence of a secure and sufficient income to support themselves and their dependents to ill-health, absence of social security, loss of social role and recognition and the non-availability of opportunities for creative use of free time. The needs and problems of the elderly vary significantly according to their age, socio-economic status, health, living status and other such background characteristics. Perhaps the most important problems confronting India's elderly are financial. Mass poverty is the Indian reality and the vast majority of the families have incomes far below the level which would ensure a reasonable standard of living (Kumar and Anand, 2006).

Living Arrangements

Living arrangement of the elderly has great importance to understand elderly status and wellbeing. Living arrangements are determined by various factors such as marital status, health status, financial dependency, as well as cultural traditions like kinship patterns and the social supports available to the aged. It becomes an important factor for the overall welfare of the elderly and gives an indication of the extent of support available from the family and kin.

In this study, living arrangements of elderly can be looked into considering the following categories as follows. Those elderly are living

- Alone
- With spouse
- With spouse, children and grand children
- Without spouse but with children and grand children
- With other relatives and
- With non-relatives

Further the living arrangements of elderly can be grouped into those living alone and co-residence. Those elderly living alone or with spouse are considered as living alone and other categories are considered as co-residence.

Objectives of the Study

In brief, following are the two objectives to be examined in this paper:

1. To study the pattern of living arrangements of elderly in the states of Uttar Pradesh and Kerala.
2. To study the determinants of living arrangements of elderly in Uttar Pradesh and Kerala.

Data and Methods

This section includes data sources, the statistical techniques and methods used for analysis.

Data Sources

For the purpose of this study the secondary data have been used. Broadly from Census of India and National Sample Survey (NSS) data have been used in this study. The Census of India (in various years) will give an idea of proportions of elderly, age and sex wise population distribution in India and particular to the states of Uttar Pradesh and Kerala. However, for studying the living arrangements of elderly in Uttar Pradesh and Kerala, the latest data from National Sample Survey (NSS) of 60th round (schedule 25.0) have been used for this study. This survey is providing the information on household characteristics

including socio and religion background, demographic backgrounds of the elderly persons which includes age, sex, marital status, number of surviving children etc., socio-economic characteristics including their occupation history, source of income, economic dependency, ownership of land and other details. Apart from this, the survey also provides information regarding living arrangements of elderly, health and morbidity, health care utilization etc. The unit level data have been used for analyzing the pattern of living arrangements of elderly and its determinants for the state of Uttar Pradesh and Kerala. In total there are 34,831 elderly (age 60 years and above) persons were interviewed in the 60th round of the survey, of which 4,715 and 1,766 elderly persons are from the state of Uttar Pradesh and Kerala respectively.

Methods

Both bi-variate and multi-variate statistical techniques are used for the analysis. The living arrangements of elderly are determined by the socio-economic and demographic background characteristics of the elderly. It is preconditioned by one's socio-economic and demographic characteristics such as age, sex, marital status, number of surviving children, level of education, occupation, and economic dependency. In the first part of the analysis which is consider the association of background characteristics and living arrangements of elderly followed by to look into the determinants of living arrangements of elderly by using logistic regression analysis. The chi-square test statistics has been used to test the association of living arrangements of elderly with background characteristics. The statistical software SPSS version 17 is used for analysis of the data.

Results and Findings

Descriptive Analysis

Patterns of Living Arrangements of the Elderly

Table 2 presents the pattern of living arrangements of elderly in India and particular to Uttar Pradesh and Kerala. It is found that higher proportions (47.2%) of elderly are living with spouse and other members followed by without spouse but with children (32.6%), and

with spouse only (11.4%). However, there is also an indication of living alone and living with others among elderly. From the table it is found that 4.4 per cent of elderly are living alone and 4.3 per cent are living with others. Similar trend are also observed for the state of Uttar Pradesh and Kerala.

Table 2

Living Arrangements among the Elderly – India, Uttar Pradesh and Kerala.

Living Arrangements	*Uttar Pradesh*		*Kerala*		*India*	
	Frequency	*Per cent*	*Frequency*	*Per cent*	*Frequency*	*Per cent*
Living Alone	185	4.1	57	3.3	1509	4.4
Living with Spouse Only	488	10.6	151	8.6	3875	11.4
With Spouse and Other Members	2224	48.4	817	46.8	16127	47.2
Without Spouse but With Children	1460	31.8	622	35.6	11126	32.6
Living with Others	234	5.1	100	5.7	1467	4.3
Total	4591	100	1747	100	34104	100

Note: Living alone includes: living as an inmate of old age home as well as not as an inmate of old age home.

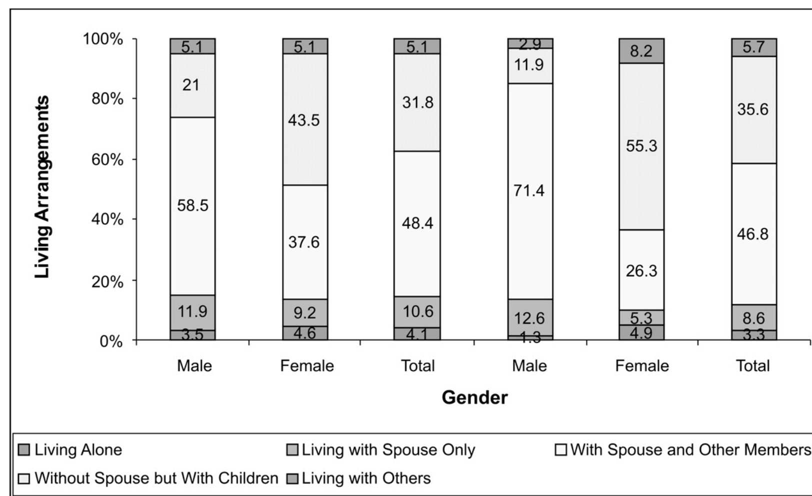
An attempt has been made to look into the gender differentials in living arrangements among elderly for the state of Uttar Pradesh and Kerala. Figure 1 presents the gender differentials in living arrangements among elderly for both the state. From the figure it is found that higher proportions of male elderly are living with spouse and other members. However, there is significant difference observed among the male elderly those are living with spouse and other members in both the states. In Kerala higher proportions (71.4%) of male elderly are living with spouse and other memerbs whereas in Uttar Pradesh 58.5 per cent of male elderly are living with spouse and other members. It might be true that the life expectancy in both the state is significantly different. Which is the major cause of higher proportions of male elderly in Kerala are living with spouse and other members. However, among female elderly higher proportions are

living without spouse but with children. In Kerala 55.3 per cent of female elderly are living without spouse but with children whereas in Uttar Pradesh 43.5 per cent of female elderly are living without spouse but with children. This is true as the life expectancy among female is high in comparison to male and the age difference between partners. In Indian culture usually wife is younger than the husband. It might be possible that the male partner died earlier than the female partner. Because of this reason higher proportions of female elderly are living without spouse but with children.

An interesting observations from the above figure 1 is that those elderly are living alone and with spouse. It is interesting to see higher proportions of female elderly are living alone in single member household. Whereas, among male elderly higher proportions are living with spouse only in two member household. These findings are also true for both the states. There is also some indication that higher proportions (8.2%) of female elderly from Kerala are living with others. This might possible in Kerala because high migration to Gulf countries among younger population which might force higher proportions of female elderly to live with others. For better

Figure 1

Living Arrangements among the Elderly with Gender – Uttar Pradesh and Kerala.

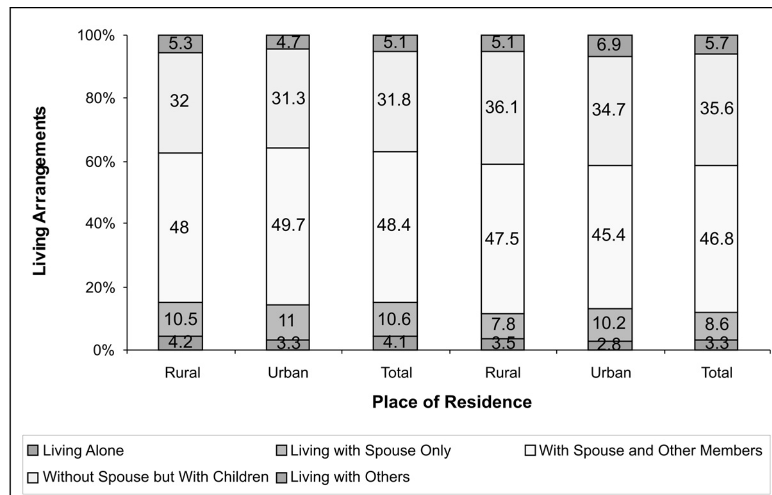


understanding of this phenomenon, the marital status and number of surviving children have to be linked with living arrangements of elderly. The following section will discuss the linkages of living arrangements among elderly by controlling for marital status and number of surviving children for both the states.

Place of residence are also equally important for understanding the living arrangements pattern among elderly. Figure 2 presents the living arrangements among elderly with place of residence for state of Uttar Pradesh and Kerala. It is found that irrespective of place of residence higher proportions of elderly are living with spouse and other members followed by living without spouse but with children. However, in a close observation it is found that higher proportions (4%) of rural elderly are living alone. It might be possible that because of rural urban migration among younger generation, higher proportions of elderly in rural residence are left behind and forced to live alone or with spouse only. Similar trend is also observed for both the states.

The drastic socio-economic changes have had a fundamental impact on living arrangements of the elderly. Some of the studies found that the number of elderly living alone is increased. They conclude that increasing independent living arrangements for the older population is attributable to demographic, economic and cultural factors (Kobrin, 1976; Kramarow, 1995; Wolf and Soldo, 1988). The increase in living alone may have an adverse impact on elderly. As the well being of the elderly greatly depend on the proper living arrangements of elderly. There is greater probability of feeling less satisfaction for those who live alone. It has been argued that the satisfaction and well being was affected by the function of living arrangements. Studies reported that those elderly who live apart receive less financial support and physical care from their children than elderly living in other types of living arrangements (Chen, 1991). In India living alone among elderly is not a desirable option. An attempt has been made to look into the different types of living arrangements with the background characteristics of the elderly.

Figure 2
Living Arrangements among the Elderly with Place of Residence – Uttar Pradesh and Kerala.



Living Arrangements of Elderly with Background Characteristics

Living Arrangements of Elderly in Uttar Pradesh

Table 3 presents the per centage distribution of elderly by living arrangements with their background characteristics for the state of Uttar Pradesh. Here the background characteristics of elderly include demographic and socio-economic characteristics. Demographic characteristics include age, marital status and number of surviving children whereas socio-economic characteristics includes religion, caste, level of education, occupation and economic dependency. From the Table 3 it is found that among young-old (60-69) higher proportions (54.5 per cent) of elderly are living with spouse and other members. There is negative association observed with age and living with spouse and other members. It means when age increases from 60 to 80 and above, living with spouse and other members decreases. Whereas, there is positive association with age and living without spouse but with children. From the table-3 it is clearly shown that among the young-old only 26.2 per cent of elderly are living without spouse but with children. Whereas, those elderly are oldest-old (80+)

higher proportions (53.7 per cent) are living without spouse but with children. In close observation it is found that a significant proportions of young-old and old-old elderly are living alone and with spouse only. Whereas, among oldest-old, living alone and living with spouse significantly declines. But living with others among oldest-old is high (9.8 per cent) in comparison to young-old and old-old. The chi-square test statistics is significant with age and living arrangements among elderly.

Table 3

Percentage Distribution of Elderly by Living Arrangements According to Background Characteristics – Uttar Pradesh (%).

Background Characteristics	*Living Alone*	*Living with Spouse Only*	*With Spouse and Other Members*	*Without Spouse but With Children*	*Living with Others*
Age Group*					
Young-old (60-69)	4.0	11.2	54.5	26.2	4.1
Old-old (70-79)	4.2	11.3	40.4	38.0	6.1
Oldest-old (80+)	3.4	4.1	28.9	53.7	9.8
Marital Status*					
Never Married	15.4	0.0	0.0	13.2	71.4
Currently Married	0.7	17.2	78.3	3.1	0.8
Widowed	8.7	0.0	0.0	82.2	9.1
Divorced/separated	20.0	00	00	60.0	20.0
Religion					
*Hindu	4.1	11.4	47.7	31.6	5.2
Muslim	3.9	5.9	52.2	33.2	4.8
Others	3.2	12.9	61.3	22.6	00
Caste*					
Scheduled tribe	3.2	6.5	67.7	22.6	00
Scheduled caste	6.1	15.4	41.7	31.8	5.0
Other backward class	3.9	9.9	48.6	33.6	4.1
Others	3.1	9.1	51.7	29.3	6.8
No. of Children*					
No Surviving Children	20.7	24.1	6.9	00	48.3

Contd...

Contd...

One Child	4.9	8.2	41.0	42.6	3.3
Two Children	5.3	8.5	38.4	43.7	4.2
More than Two Children	2.7	9.5	53.4	32.6	1.7
Level of Education*					
No Education (Illiterate)	4.8	10.0	43.4	36.5	5.3
Primary School	2.3	10.7	58.2	23.0	5.7
Below Secondary School	2.2	11.6	63.5	18.8	3.9
Higher Secondary and above	0.5	15.0	66.8	14.4	3.2
Occupation*					
Self Employed	4.7	13.0	62.6	16.6	3.2
Unpaid Family Workers	00	6.8	60.0	22.8	10.4
Regular Employees	6.7	20.0	60.0	6.7	6.7
Casual Labourers	9.6	14.8	47.6	24.3	3.7
Domestic Duties	3.4	14.2	47.4	32.2	2.9
Pensioners/Remittance Receivers	13.0	18.1	46.2	16.4	6.2
Others	1.5	3.5	34.9	52.5	7.6
Economic Dependency*					
Not dependent on others	6.5	15.8	57.2	16.8	3.9
Partially dependent on others	5.4	7.1	56.7	26.4	4.5
Fully dependent on others	2.1	7.4	40.6	43.9	6.1
Total Respondents	185	488	2224	1460	234

Note: Living alone includes: living as an inmate of old age home as well as not as an inmate of old age home. *$\chi < 0.001$.

Similarly marital status among elderly is also important factor for living arrangements in old age. From the Table 3 it is found that higher proportions (71.4 per cent) of elderly those are never married are living with others followed by living alone (15.4 per cent). But it is interesting to find among those elderly are currently married higher

proportions (78.3 per cent) are living with spouse and other members followed by living with spouse only (17.2 per cent). It is surprising to find those elderly are currently married very few elderly are living alone or with others. However, those elderly are widowed higher proportions (82.2 per cent) of elderly are living without spouse but with children. There is significant proportions of widowed elderly are living alone (8.7 per cent) and with others (9.1 per cent). Among those elderly are divorced/separated higher proportions (60 per cent) of elderly are living without spouse but with children followed by living alone and with others (20 per cent each). From this analysis it is strongly evident that how marital status played significant role for living arrangements of elderly. The chi-square test statistics is significant with marital status and living arrangements among elderly.

Number of surviving children in old age have significant role for understanding the living arrangements of elderly. Especially in the context of demographic transition it will be interesting to see the living arrangement pattern among elderly with number of surviving children. From Table 3 it is found higher proportions (20.7 per cent) of elderly are living alone or with spouse only (24.1 per cent) among those elderly do not have any surviving children in Uttar Pradesh. There is also indication of living with others (48.3 per cent) among those elderly do not have any surviving children. However, it is interesting to see the living arrangement pattern among elderly those are having surviving children. As number of surviving children increases from one to more than two there is significant decline of living alone or with spouse or with others. From the Table 3 it is found that those elderly are having surviving children higher proportions are living with spouse and other members or without spouse but with children. From this analysis it is clearly understood the importance of surviving children for determining the living arrangements of elderly. The chi-square test statistics is significant with number of surviving children and living arrangements of elderly.

An attempt has been made to look into the living arrangements pattern among elderly with their level of education. From the Table 3 it is found that among illiterate elderly higher proportions (4.8 per cent) are living alone. Whereas those elderly have education of higher

secondary and above significant proportions (15 per cent) of elderly are living with spouse only. However, it is clear that irrespective of level of education higher proportions of elderly are living with spouse and other members or without spouse but with children.

Other than studying level of education and living arrangements patterns occupation of the elderly is also have significant importance for determining the living arrangements in old age. From the Table 3 it is found that higher proportions (13 per cent) are living alone or with spouse only (18.1 per cent) among those elderly are getting pension. However those elderly are self employed, unpaid family workers, engaged in domestic duties and others (those are not working) significant proportions of elderly are living with spouse and other members or without spouse but with children. From this analysis it is clearly understood that those elderly are engaged in household work significant proportions of elderly are living with their family. Whereas those elderly have some source of earning significant proportions of elderly are living alone or with spouse only. The chi-square test statistics is significant with occupation and living arrangements of elderly. The next section will discuss on economic dependency and living arrangements of elderly.

Here an attempt has been made to look into the economic dependency and living arrangement among elderly. From the Table 3 it is clearly shown that those elderly are not dependent on others significant proportions of elderly are living alone (6.5 per cent) or with spouse only (15.8 per cent). Whereas those elderly are dependent on others (both partially and fully dependent) higher proportions of elderly are living in co residence. From this analysis it is clear that because of economic dependency on others higher proportions of elderly are in co residence. The chi-square test statistics is significant with economic dependency and living arrangements of elderly.

Living Arrangements of Elderly in Kerala

An attempt has been made to look into the living arrangements pattern among the elderly in Kerala with their background characteristics. It will be interesting to see the impact of demographic transition on living arrangements of elderly. Kerala is one of the states in India

which is having high life expectancy and reached demographic transition in around 1990s. Table 4 presents the per centage distribution of elderly by living arrangements with the background characteristics of elderly in Kerala. From the table it is found that those elderly are young-old (60-69 years) significant proportions are either living alone (3.7 per cent) or with spouse only (10.4 per cent). Whereas, those elderly are 70 years and above higher proportions are living in co residence. From this analysis it is clear that in younger age, elderly are physically and economically active, can able to manage in living alone or with spouse only. However, once elderly crossed the age of 70 years and above they are physically and economically dependent on others which forced them to live in co residence. There is the possibility of death of spouse among those elderly are in old-old or oldest-old which forced majority of elderly to live without spouse but with children. There are also some instances where in oldest-old, significant proportions (9.9 per cent) of elderly in Kerala are living with others. The chi-square test statistics is significant with age and living arrangements of elderly.

Marital status in old age have significant for determining living arrangements of elderly, which is even true for the state of Kerala. From table-4 it is found that those elderly are never married (14.7 per cent) and divorced or separated (12.5 per cent) significant proportions are living alone. Whereas those elderly are currently married higher proportions are either living with spouse and other members (80.6 per cent) or with spouse only (14.7 per cent). Similarly those elderly are widowed higher proportions (83.4 per cent) of elderly are living without spouse but with children. There is significant proportions of elderly are living with others among those elderly are never married (82.3 per cent) and divorced or separated (31.3 per cent). From this analysis it is clearly signify the association of marital status and living arrangements of elderly. The chi-square test statistics is significant for marital status and living arrangements of elderly.

Table 4

Percentage Distribution of Elderly by Living Arrangements According to Background Characteristics – Kerala (%).

Background Characteristics	*Living Alone*	*Living with Spouse Only*	*With Spouse and Other Members*	*Without Spouse but With Children*	*Living with Others*
Age Group*					
Young Old (60-69)	3.7	10.4	52.7	28.4	4.7
Old-Old (70-79)	3.2	7.8	41.9	41.2	5.8
Oldest-Old (80+)	1.4	2.8	32.4	53.5	9.9
Marital Status*					
Never Married	14.7	00	00	2.9	82.3
Currently Married	0.5	14.7	80.6	3.4	0.8
Widowed	6.5	00	00	83.4	10.1
Divorced/Seperated	12.5	00	00	56.3	31.3
Religion*					
Hinduism	3.1	9.4	45.8	36.2	5.4
Islam	3.2	2.9	49.7	36.9	7.3
Others	3.8	11.6	47.2	32.2	5.3
Caste*					
Scheduled tribe	00	00	27.3	54.5	18.2
Scheduled caste	4.0	9.3	35.8	47.7	3.3
Other backward class	2.8	6.6	48.3	35.7	6.6
Others	3.8	11.5	47.5	32.4	4.8
No of Surviving Children*					
No Surviving Children	17.2	13.8	6.9	00	62.1
One Child	11.8	11.8	21.6	47.1	7.8
Two Children	3.6	9.3	51.8	31.6	3.6
More than Two Children	2.2	6.9	49.5	38.5	2.9
Level of Education*					
No Education (Illiterate)	3.8	5.3	33.0	51.0	6.9

Contd...

Contd...

Primary School	2.6	7.5	52.5	32.3	5.2
Below Secondary School	3.5	11.4	53.3	26.2	5.7
Higher Secondary and above	4.4	23.3	60.0	7.8	4.4
Occupation*					
Self Employed	4.4	16.5	62.9	12.5	3.7
Unpaid Family Workers	00	15.8	36.8	31.6	15.8
Regular Employees	12.0	4.0	56.0	12.0	16.0
Casual Labourers	5.3	8.5	58.5	23.4	4.3
Domestic Duties	2.8	8.8	38.8	44.8	4.8
Pensioners/ Remittance Receivers	6.5	13.5	45.1	29.3	5.6
Others	1.6	3.9	44.3	43.5	6.7
Economic Dependency*					
Not dependent on others	5.4	15.5	56.9	17.2	5.0
Partially dependent on others	3.0	11.9	45.4	33.1	6.6
Fully dependent on others	2.3	4.4	42.4	45.1	5.7
Total Respondents	57	151	817	622	100

*$\chi < 0.001$

Number of surviving children is also equally important for determining the living arrangements of elderly. From table-4 it is found that significant proportions of elderly are either living alone (17.2 per cent) or with spouse only (13.8 per cent) or with others (62.1 per cent) among those elderly do not have surviving children. However, as number of surviving children increases from one child to more than two children living alone or with spouse or with others decreases significantly. From the table-4 it is clear that when the number of surviving children increases from one child to two children and more co residence with family members increases significantly. From this analysis it is clearly signify the importance of surviving children for determining the living arrangements of elderly. The chi-square test

statistics is significant with number of surviving children and living arrangements of elderly.

Level of education is also equally important for living arrangements of elderly. Kerala is one of the state in India having highest literacy rate, it will be interesting to see the living arrangements of elderly with their level of education. From the table-4 it is found those elderly are educated up to higher secondary and above significantly higher proportions are living either alone (4.4 per cent) or with spouse (23.3 per cent). However, those elderly are illiterate or low level of education higher proportions of elderly are living either with spouse and other members or without spouse but with children. The chi-square test statistics is significant with level of education and living arrangements of elderly.

Occupation of the elderly is also significant for their living arrangements. From the table-4 it is found that significant proportions of elderly are living alone or with spouse only among those elderly are self employed, regular employees and pensioners. However those elderly are unpaid family workers, casual labourer, attending domestic duties and others (those are not working) higher proportions of elderly are living in co residence. The chi-square test is significant for occupation and living arrangements.

Economic dependency among elderly is also significant for living arrangements. From the table-4 it is found that significant proportions of elderly are either living alone (5.4 per cent) or with spouse (15.5 per cent) among those are not dependent on others. However, those elderly are dependent on others higher proportions are living in co residence either with spouse and other members or without spouse but with children. The chi-square test is significant for economic dependency and living arrangements among elderly.

Determinants of Living Arrangements

Multi-variate Analysis

An attempt has been made to look into the determinants of living arrangements of elderly by controlling for age, sex, marital status, number of surviving children, level of education and economic dependency. Table-5 presents results of logistic regression on living

arrangements of elderly by considering those are living in family and non family in Uttar Pradesh and Kerala. The same model have been fitted for both the state independently. The table-5 present only the coefficient ($) and odds ratio E($) of the corresponding controlled variable with their level of significance. From the table it is found that among the oldest-old (80+) elderly are more likely to live with family in comparison to their counter part young-old (60-69 years). However, among female elderly are less likely to live with family in comparison to male counterpart.

Table-5

Results of Logistic Regression on Living Arrangements of Elderly in Uttar Pradesh and Kerala.

	Uttar Pradesh		*Kerala*	
Variables in the Model	β	*Odds Ratio Exp(β)*	β	*Odds Ratio Exp(β)*
Age Young-old (60-69) ref.		1.000		1.000
Old-old (70-79)	-0.295	0.745**	0.079	1.082
Oldest-old (80+)	0.06	1.062	0.212	1.236
Gender (Male) ref.		1.000		1.000
Female	-0.464	0.629**	-0.388	0.679*
Marital Status				
Others (ref.)		1.000		1.000
Currently Married	0.321	1.378	1.197	3.310*
Widow	0.608	1.836	1.327	3.770*
Surviving Children				
No Children (ref.)		1.000		1.000
Once child	4.146	63.180**	3.435	31.033**
Two children	4.053	57.583**	4.366	78.757**
Two and more	4.345	77.130**	4.542	93.904**
Level of Education				
No education (ref.)	0.2	1.000	0.028	1.000
Primary School		1.222		1.028

Contd...

Contd...

Below Secondary School	0.225	1.252	-0.135	0.874
Higher Secondary and above	0.537	1.711*	-0.605	0.546
Economic Dependency				
Not dependent (ref.)		1.000		1.000
Dependent on others	0.988	2.685**	0.733	2.082*
Intercept	-3.258	0.038**	-4.083	0.017*
N		4715		1766
Likelihood ratio P2		177.305		139.999
DF		12		12
P		0.047		0.074

* Significant at 0.05 level

** Significant at 0.01 level

With respect to marital status those elderly are either currently married or widow, are more likely to live with family in comparison to those elderly are never married or divorced/separated. Similarly number of surviving children is also most significant for determining the living arrangements of elderly. From our analysis it is found that those elderly are having two and more number of surviving children they are more likely to live with their family in comparison to those elderly do not have any surviving children. It means that those elderly are having at least one surviving child the probability of living with family is high in comparison to those elderly do not have any surviving children. Similarly, economic dependency among elderly is also significant for determining their living arrangements. From our analysis it is found that those elderly are dependent on others they are more likely to live with family in comparison to those elderly are not dependent on others.

From the table-5 it is found that gender, number of surviving children and economic dependency of the elderly are the major determinants for their living arrangements. This is common for both the state Uttar Pradesh and Kerala. It can be conclude that those elderly

are male, having surviving children and economically dependent on others are more likely to live with family in comparison to their counter parts female, not having children and economically not dependent on others.

Conclusion

It is conclude that there is significant difference in living arrangements among elderly with the background characteristics. It is interesting to conclude that there is no significant difference in living arrangement pattern in Uttar Pradesh and Kerala. Irrespective of level of demographic transition the pattern of living arrangements of elderly are unique. The determinants of living arrangements of elderly are also unique irrespective of the level of demographic transition. Among the male elderly, currently married, having surviving children and economically dependent elderly are more likely to live with family in comparison to those elderly are female, never married, divorced/separated, no surviving children and economically not dependent are more likely to live alone. In this scenario where higher proportions of elderly are living in co residence the policy should enforce for co residence with children. There is also some indication of living alone among elderly which is not desired in old age. Because of some constraints elderly are forced to stay alone or with spouse only. The reason of living alone among elderly in these two states may be different. In the context of Kerala due to high levels of out migration among younger generation, many elderly are forced to stay alone in their difficult days. Whereas, in Uttar Pradesh the reason of living alone among elderly is different from the state of Kerala. For this reason the policy should be formulated on the basis of the requirement of the elderly with reference to the particular geographical region. In this scenario the policy should enforce for financial benefit for those elderly are living alone or with spouse only. Further in view of low economic status of elderly in India the policy makers should continue to support the provision of housing subsidies for the elderly for independent living.

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Appraisal of Nutrition and Health Related Knowledge, Attitude and Practices of Rural and Urban Elderly Using A Gender Lens

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ABSTRACT

Women are subject to gender differences which have consequences on their health status. Because of their biological attributes, women live longer than men. As they increasingly form a larger proportion of the elderly population, they will become progressively more susceptible to disease in the future and suffer from more ill health or are more vulnerable to certain diseases than elderly men. Therefore, an appraisal of knowledge, attitudes and practices (KAP) related to nutrition and health of urban (institutionalized and non institutionalized) and rural (non institutionalized) elderly of both the sexes was attempted in this study using a gender lens. It was found that Urban elderly were a shade better with respect to KAP, than their rural counterparts. The knowledge with respect to nutrition and health was not satisfactory in elderly women and this reflected in their practices, though the attitude was satisfactory

Key Words: Knowledge, Attitude, Practice, Institutionalized, Non Institutionalized, Rural, Urban.

The right kind of food has an important role to play in promoting good health and health is an important factor which determines one's attitude towards the life because when health is lost, one's hope towards life is also lost (Kasthoori, 1996). Healthy ageing decreases morbidity and promotes quality of life.

Living conditions of elderly in India as found during the conduction of National Family Health Survey–2 (1998–99) indicates that population of elderly has increased and in most of the cases typically elderly is between 60 and 70 years with no education and low standard of living. More than one third of the elderly are widowed with sizably more widows among them (Radkar and Kaulagekar, 2006). According to World Health Organization (WHO) report, feminization of its ageing population could lead to a rapid increase in its number of widows and it is also shown that majority of India's elderly are now women, thus the trend has a significant consequences for the health of older women. On the other hand, "women's longer life spans compared to men combined with the fact that men tend to marry women younger than themselves, mean that the number of widows will increase rapidly". As India is a male dominated society, women in India rely on their husbands for the provision of economic resources and social status. A large percentage of older women are at the risk of dependency, isolation, neglect and dire poverty and its further consequence of differential life expectancy is that there are more women especially among the oldest old, those 85 years and above. Thus disability rates rise with age; this means that there are substantial number of older women than older men living with disability (Sinha, 2012, 2012a, 2012b).

Older adults residing in rural areas face additional barriers that may preclude optimal health care. Various environmental, social and physical factors place rural older adults at nutritional risk or deprivation (Goins *et al.,* 2005). There exists a difference between elderly persons residing in rural and urban areas. On the one hand, urban elderly have demonstrable advantages in terms of many "objective" indicators of quality of life, on the other they appear to have no corresponding advantage in terms of subjective or emotional well being and perhaps even show a small disadvantage on such dimensions (Lee and Lassey, 2010).

Urbanization, modernization and globalization have led to change in the economic structure, erosion of societal values, weakening of social values and social institutions such as the joint family have given rise to the concept of institutionalization or old age homes in India (Gormal, 2003). Institutionalization is associated with higher prevalence of malnutrition, inspite of the fact that there is provision of adequate quantity and quality of food, showing that provision of food alone is not enough to maintain good nutritional status. Presence of disability, oral factors or social factors need to be taken into account as an explanation of this situation. (Woo, 2000).

Hence in the present study, an attempt was made to findout the levels of knowledge, attitude and practices related to nutrition and health of the institutionalized and non institutionalized rural and urban elderly-men and women. The data was analysed using a gender perspective.

Methods and Materials

Sample

290 aged persons (men and women of 65 years and above) were selected by purposive sampling technique for the study. The sample was drawn from institutionalized urban (IU), non institutionalized urban (NIU) and non institutionalized rural (NIR) living conditions. The total number of IU subjects was 100 (68 women and 32 men), NIU subjects was 90 (40 women and 50 men) and that of NIR subjects was 100 (49 women and 51 men). IU subjects were selected from three old age homes of north and west part of Delhi. The NIU subjects were drawn from central and northern parts of Delhi and the NIR subjects were from rural areas of Tonk (Rajasthan).

Tools

Structured interview schedule was prepared to seek information such as age, socioeconomic status, educational profile, occupational status, retirement status, marital status, living with and disease condition. A KAP (knowledge, attitude and practice) proforma was used to assess the views of subject on nutrition and health. The CAP's

each segment contains 15 statements. The knowledge segment of KAPs was assessed using knowledge. Each question has 5 alternative responses (multiple choices with only 1 correct option). Questions were related to the various parameters of nutrition and health such as cooking practices, dietary practices and health problems. Correct response was scored as 1 and a wrong response was scored as 0. The maximum possible score was 15 and the minimum possible score was 0. The second aspect of KAP, i.e., attitude related to health and nutrition was assessed by 5 point Likert's scale. The 15 statements related to health and nutrition were to be answered by selecting one appropriate option on this scale as "strongly agree/agree/neither agree nor disagree/disagree/strongly disagree", which were allotted the scores–5, 4, 3, 2, 1, respectively. Thus maximum possible score was 75 and minimum was 15. Similarly practice related to nutrition and health was assessed by practice assessment form which contained 15 statements. Out of these 4 statements were of negative nature (unfavourable), i.e., their appropriate answer would be "no". Against each statement, two alternative responses (Yes/No) were given. For a sound practice, 1 mark was allotted and 0 was given for incorrect practice. The minimum possible score was 0 and maximum possible 15.

Data Collection

Before administration of KAP proforma, it was pretested by eminent panel of experts. The investigators approached each subject to explain them the purpose of the study and to assure them that their responses would be kept confidential. The proforma was filled in by the investigator.

Data Analysis

The results were expressed in terms of frequency, percentage, mean and standard error (S.E.). Z test was applied to assess gender difference in nutrition and health related KAP among subjects and significance difference was foundout.

Results

The objectives of the present study were to assess the KAP related to nutrition and health among rural and urban elderly subjects of both the sexes in various living conditions.

Demographic Details of the Subjects

Background of the subjects revealed that mean age of both the sexes was found to be similar in all the three groups as 77.00, 71.63 and 71.54 years in IU, NIU and NIR settings respectively. Literacy level was found high in urban group as compared to rural group. Illiteracy was found highest amongst women (26.11%) as compared to men (13.53%). Almost half of the elderly subjects were widowed and majority (87.00%) was from institutionalized residential settings. Thus percentage of widows was higher (57.32%) as compared to widowers (55.63%). Occupational status of the subjects revealed that 71.00 per cent women were not engaged in any type of paid work and they were involved only in household chores. Disease condition of the subjects demonstrated that women were more vulnerable to disease than men and suffered from more diseases, i.e., hypertension (40%), diabetes (18.47%), osteoporosis (66.87%) and cardiovascular disease (18.47%).

Knowledge

The level of knowledge was not found satisfactory in all the three study groups. Only 6 males in IU and 3 females in NIU group scored 11–14 whereas 0 score was obtained by 2 females of NIU, 6 males and 10 females of NIR setting. Gender wise distribution showed that mean knowledge scores of men were better as compared to women in all groups (Table 1). Significant difference in knowledge scores of elderly men and women was found in IU and NIR groups (Table 2). Frequency calculation of correct responses showed that 16 males and 1 female in IU group and only 1 male in NIU group were aware about knowledge of energy requirement. Majority of males and females of all settings except NIR females had fair knowledge about appropriate cooking methods. Knowledge about antioxidants was found highest in NIU males when compared with subjects of all other settings. In NIR group, none of the subjects had knowledge about normal blood

pressure range, blood forming nutrients, richest source of iron and anaemia.

Table 1

Mean KAP Scores of the Subjects

Variable	*Group*		*n*	*Mean ±S.E.*		
				All subjects	*Males*	*Females*
Knowledge Score	I	Urban	100	6.25 ± 0.26	8.43 ± 0.40	5.22 ± 0.26
	NI	Urban	90	6.66 ± 0.28	7.24 ± 0.36	5.92 ± 0.42
		Rural	100	2.09 ± 0.10	2.49 ± 0.18	1.67 ± 0.17
Attitude Score	I	Urban	100	67.88 ± 0.42	68.70 ± 0.66	67.47 ± 0.54
	NI	Urban	90	69.58 ± 0.39	69.60 ± 0.43	69.57 ± 0.69
		Rural	100	64.73 ± 0.52	65.03 ± 0.70	64.40 ± 0.71
Practice Score	I	Urban	100	8.82 ± 0.17	8.65 ± 0.27	8.80 ± 0.22
	NI	Urban	90	8.68 ± 0.19	8.80 ± 0.29	8.55 ± 0.24
		Rural	100	6.58 ± 0.14	6.39 ± 0.21	6.77 ± 0.18

Attitude

The mean scores of both sexes on attitude have similarities and demonstrated favourable attitude related to nutrition and health (Table 1). No significant difference was found between the attitude of males and females of all settings (Table 2). In IU subjects, 3 males and females each obtained maximum possible score while only 1 female obtained minimum possible score. In NIR group, 5 females and 2 males while in NIU group, 3 females obtained maximum possible score. Frequency calculation of attitude scores revealed that majority of the subjects strongly agreed with the concept of "enjoying good health" whereas disagreement to this was shown by females of IU group. Majority of subjects in each group were in favour of attitude that "good nutrition not only adds years to life but also life to years" but primarily neither agree nor disagree attitude was reflected by females of IU setting and few subjects of NIR group. Majority of the subjects strongly agreed with the concept that "diet is related to healthy ageing", whereas strongly disagree attitude was marked by only 1 female in NIU group.

Table 2

Gender and Living Condition Wise Comparison of KAP Scores Using Z Test

Variable	*Comparison groups*	*Calculated "Z" value*
Knowledge	Male v/s Female (All subjects)	4.27 *
	Male v/s Female (IU)	6.84 *
	Male v/s Female (NIR)	3.41 *
	Male v/s Female (NIU)	0.06 NS
Attitude	Male v/s Female (All subjects)	1.09 NS
	Male v/s Female (IU)	1.50 NS
	Male v/s Female (NIR)	0.42 NS
	Male v/s Female (NIU)	0.26 NS
Practices	Male v/s Female (All subjects)	1.36 NS
	Male v/s Female (IU)	0.68 NS
	Male v/s Female (NIR)	1.46 NS
	Male v/s Female (NIU)	0.83 NS

* Significant at 5 per cent

NS–Not Significant

Z tab–1.96

Practice

Mean practice scores of females were found better in NIR and IU subjects as compared to males (Table 1). Maximum possible score was not obtained by any subject. This depicts that no one had excellent practices related to nutrition and health. There was no significant difference between the practices of males and females of all settings (Table 2). There were many statements on which dietary practices of the subjects were sound. Majority of females in IU group actively seeked information on nutrition which was not observed for male subjects in the same group. None of the subject from the NIR followed this positive practice. Involvement in cooking practices was found highest in females of NIR setting. Regular milk consumption practice was found similar in all the settings whereas very few males in IU group were practicing this. Use of processing techniques like germination and fermentation was negatively answered by IU male subjects. Similar was the response in rural subjects. Poor practices related to active participation in yoga/meditation, exercise were reported by NIR male and female subjects.

Thus, from the overall findings, it was revealed that knowledge related to health and nutrition is better in males of all settings as

compared to females. All the three different groups as per living conditions had a favourable attitude related to nutrition and health. Dietary practices of females were better than that of males.

Discussion

This study was conducted to ascertain the KAP related nutrition and health aspects among rural and urban elderly male and female subjects. Nutrition and health knowledge may influence dietary behaviour directly or through nutrition attitudes. Dietary behaviour may further become dietary patterns and influence one's nutrient intake. Therefore, understanding people's nutrition knowledge, attitudes and practices is the basis for nutrition education (Grotkowski and Sims, 1978; Stanek and Sempek, 1990; McIntosh *et al.,* 1990). The elderly population is increasing in our country in rural as well as urban set up. Kinsella and Phillips (2005) and Batra (2004) stated that the number of unmarried and widows was more than widowed males. These results were in accordance with present study. Morbidity was found higher in women as compared to men. This was also indicated by the study of Batra (2004), who stated that majority of females suffered from disease of musculoskeletal and circulatory system when compared to males.

Elderly females with lower educational levels obtained lower knowledge scores than males with higher educational level. This was indicated by the study of Pon *et al.,* (2006), who stated that a strong positive relationship exists between educational level and knowledge scores. Studies conducted by different researchers suggest that illiteracy rate is higher in females than males. Dismal literacy levels of elderly women have been reported as 40.00 per cent by Radkar and Kaulagekar (2006), 32.90 per cent by Sengupta *et al.,* (2007) and 13.33 per cent by Batra (2004) whereas the literacy level of men reported in the same studies was 80.00 per cent, 53.90 per cent and 30.60 per cent respectively. Mean knowledge scores of males in all groups was found slightly better than female subjects. Lin and Lee (2005) stated that the elderly had poor nutrition knowledge especially about the relationship between nutrition and disease.

Significant difference was not found between the attitude of male and female subjects. Lin and Lee (2005) observed that highly educated

elderly males expressed more positive attitudes about nutrition than elderly females with lower educational levels. Similarly Fischer *et al.*, (1991) conducted study on nutrition knowledge, attitude and practices of elderly and stated that older persons had positive attitude for efficacy, intention and outcome expectation. Study of Rurik (2006) revealed that attitude scores of male subjects in terms of meal frequency were high during aging in both genders, especially in males, which were inconsistent with present findings. Hearty *et al.*, (2007) demonstrated that majority of the subjects had a positive attitude towards healthy eating behaviour. Attitude towards health and nutrition in any of the subject group was not dissatisfactory which is one of the salient findings of this study.

The practices were not found to be satisfactory but mean practice scores of females were slightly better in IU subjects than their male counterparts. These results were consistent with the study of Brombach (2001) who stated that meal pattern of females was very structured as compared to males. Similarly Rurik (2006) stated that meal frequency increased during aging in both genders, especially in men, and fluid intake was low, especially in women.

Thus from the overall findings, it can be said that knowledge and attitude were poor in elderly women but they were at par in practices related to nutrition and health when compared to male counterparts. Special attention needs to be paid to the dietary practices followed by the rural subjects.

Conclusion

The study found out that a wide gap still exists between the present knowledge, attitudes and practices and the desired KAP of the subjects in perspective of gender. Thus it can be concluded that for modification of behaviour and practices of the subjects (males and females), it is more important that nutrition and health education should be imparted to the subjects as well as their caretakers.

Recommendations

From the information gathered in regards to assess KAP related to nutrition and health aspects among rural and urban elderly through gender lens perspective, the following recommendations can be made:

1. Nutrition counselling and dietary knowledge should be imparted to group of elderly subjects (both males and females) as well as caretakers through charts, posters, leaflet and personal discussion.
2. Specific study on Information, Education and Communication (IEC) package on the nutrition knowledge, attitude and practices of elderly males and females should be designed.

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Elderly in Truncated Social Network: An Agonized Living Status Towards Counting the Days of Death

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ABSTRACT

The present paper presents the living status of elderly population of urban housing of Kolkata in a truncated social network after their retirement from their jobs. These elderly persons were the 1st generation in the urban area for their employment and they had to root out their kins, friendship and neighbourhood network in their native place. But after their retirement from their jobs they were alone even when they were living with their immediate family members. 50 elderly people of such setting were studied through informal interview, group interaction and participants observation. It was found that their living status was enough to count their last day of life. There was no such engagement for them in fruitful purpose where their experiences and skill could be respectfully dignified.

Key Words: Elderly population, Social network, Daily life and living status.

The global census estimates that the ageing population is increasing due to decline in morbidity, reduction in birth rate and

increase in life expectancy. Today it represents 11 per cent of the world population and which would be over 22 per cent in 2050. So, the increasing rate is about 3.7 times from 1950 to 2050. In India the size of population aged 60 and above is expected to increase from 77 million in 2001 to 179 million in 2031 and further to 301 million in 2051. (Irudaya Rajan, *et al.*, 1999).

The history of the origin of family was the vital changing factor of the human society. In a household set up the head of the family nurtured all the members through some rules of relation within the members of the family and with the outside world (Oberoi, 1993).

Gradually progress and development of the human society led variously to the people's role and contribution to frame a more and more diversified society.

Thus from the theoretical perspective the study of family is a different matter because everyone has experience of family life and everyone has opinions and feeling on it. "The movement of the progressive societies has hitherto been a movement from status to contract" – starting as from one terminus of history, from a conditions of society in which all the relations of persons are summed up in the relations of family, we seemed to have steadily moved towards a phase of social order in which all these relations arise from the free agreement of individuals (Ibid.).

It is viewed that patriarchal family is a group of men and women, children and slaves, of animate and inanimate property, all connected together by common subjection to the parental power of the chief of the household. It expresses an authority structure in which the senior most male agnate exercised absolute power including that of life and death, over all family members. India is a plural or multi-cultural society and a highly stratified one besides, but the domain of kinship is an area in which this is patently evident (Ibid.).

The concept of Indian family has been denoted as large and noisy, with parents and children, uncles, aunts and sometimes cousins, presided over by benevolent grandparents, all of them living together under one roof. Its members often squabble among themselves but

remain, in most cases, intensely loyal to each other and always present a united front to the outside world (Kakar & Kakar, 2007).

So, undoubtedly the family is the best place for elderly to spend the later part of life and living with children in the most preferred living arrangement of the aged. But the urbanization as well as industrialization brings significantly rapid changes in the social mobility of people of every concern. The mobility was due to economical needs and demands. The migration is linked up with social and economical mobility among people into urban area. They have developed and established their own household set up separately in urban area. Linkage with the rural household has been restricted with a certain frequency of visit or occasionally. To promote the settlement with a safe shelter to the urban people the housing facilities have been operated in the urban area differently as per the economic ability of the people. This facility of shelter gives space to the people altogether from various background. They are living in the housing complex/apartments with their own belief and culture. A new culture considered as "flat culture" – newly settled household in residual flats in housing complex/apartments of different measurement in urban area. It has also given shelter to father – mother and children for first generation. A family, the primary social and economic unit in a flat includes the following function – (1) maintaining the physical health and safety of family members by providing basic necessities (2) providing for emotional growth, motivation and self esteem within the context of love and security (3) helping to shape a belief system from which goal and values are derived and encouraging shared responsibility for family and community (4) teaching social skills and critical thinking, promoting lifelong education and providing guidance in responding to culture and society and (5) creating a place for recreation and recuperation from external stress is being promoted now a days. But their personal social network and support system has been truncated because the link with kins and with their natal families is restricted and has become thinner, while the people in urban housing maintain a 'first order' social network (Goode, 1994).

Later on the children when they become adult separate from their parents, even when they live in the same City. In the housing

complex/apartments they live with different families under same complex, but there is no or limited scope of emotional sharing and interaction with each other. In many cases they are not familiar with each other yet they are involved in gossips. They set specific relationship accordingly to their self interest and it leads to nourishment of a special social bond.

When the elderly cease to be functional, they may be viewed as a 'burden' upon the family. While they face the problems of physical fitness and health problems, financial problems, psychological problems and problems of interaction in a social familial setting. Psychosocial and environmental problems include the feeling of neglect, loss of importance in the family, loneliness and feeling of unwantedness, feelings of inadequacy and obsolescence of skills, education and expertise. (Swaminathan, 1996). It is evident that the importance of social network focuses primarily on the state of system emphasizing both the characteristics of the set of linkages (structure) and on broader range of exchanges between the anchoring individual and members of the network.(Belle, 1982). Social networks are the source of direct help and a source of linkage to other resources. It provides a much needed sense of identity, a feeling of belonging of being wanted. But the changing scenario has narrowed their network of relationship (Shabeen Ara, 1995) which they used to maintain in the family connected with institution of community and society (workplace, public services and religions). They came through a meso system – a set of interrelations between two or more setting as an active participants (Bronfenbrenner, 1979). They were within a social network – "a specific set of linkage among a defined set of persons"(Mitchell, 1969). After their retirement from their job their link with work place is terminated. So, the whole day they pass with some mandatory domestic helps and leisure with some fellows within their periphery of almost same age for a little while in the afternoon or evening. There is either no scope of social engagement or if all there is it is of limited scope. They generally live alone because of non-involvement of their immediate generation. The new social network is thin and it is determined in terms of their economic

position. The time of their retired life is absorbed in counting the days towards their end and consequently is devoid of any value.

The present study was focused to the daily life of elderly of urban family and the impact of their social network for leading to an agonized living status.

Method

For the purpose of this study the elderly population who had settled themselves in urban housing of Kolkata was chosen. Although exploratory method was used in collecting data, the quantitative method was also used. The 50 elderly subjects with a male and female ratio 4:1 of 60–80 years of age and retired from their different jobs were selected in terms of education, occupation and marital status, etc. Here the personal informal interview, method of group interaction and participant observation were involved in studying their living status and related aspects studying of their retired lives.

Results and Discussion

Demographic Profile of Elderly

Table 1 (Social and educational background of the elderly) describes that most of elderly (90%) enjoyed their conjugal relation and out of which 22 per cent were in broken spousal relation because their partners' were deceased and 14 per cent respondents were in 60–70 years of age and 8 per cent respondents were in the age group of 71–80 years. The information has showed that 30 per cent (n=10) of female elders were widows while male (widowers) were 20 per cent (n=40). Secondly a minority of them (10%) was in single marital status. According to their educational background it has been noted that 60 per cent of them were graduate and 40 per cent of them graduate.

Their job pattern in table 2 shows that 32 per cent were in teaching profession (postgraduate 20% and graduate 12%) and 48 per cent of them were in administrative jobs (32% were graduates and 8% were post graduates). The remaining respondents retired from clerical jobs (16% graduates 24% post graduates).

Table 1
Social and Educational Background

Educational Background	*Marital Status*												*Total*
	Un-married (Single)				*Married*				*Widow(er)*				
	60–70 yrs		*71–80 yrs*		*60–70 yrs*		*71–80 yrs*		*60–70 yrs*		*71–80 yrs*		
	M	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	
Graduate	2(4%)	2(4%)	-	-	13(26%)	4(8%)	4(8%)	-	2(4%)	2(4%)	1(2%)	-	30 (60%)
Post graduate	1(2%)	-	-	-	7(14%)	2(4%)	4(8%)	-	2(4%)	1(2%)	3(6%)	-	20(40%)
Total	3(6%)	2(4%)	-	-	20(40%)	4(8%)	8(16%)	-	4(8%)	3(6%)	4(8%)	-	50(100%)

Table 2

Occupational Background (from the job they retired)

Educational Background	*Job Pattern*			*Total*
	Teaching Job	*Administrative Job*	*Clerical Job*	
Graduate	6(12%)	16(32%)	8(16%)	30(60%)
Post graduate	10(20%)	8(16%)	2(4%)	20(40%)
Total	16(32%)	24(48%)	10(20%)	50(100%)

Living Status

The findings in table 3 show that the married elderly persons were mostly (46%) living with their immediate family and out of them 36 per cent were married and 10 per cent were widows(ers). But 30 per cent of them were had their survival with the assistance of their maidservants (domestic workers) and the ratio of such males and females was 2:1. The findings also indicate that 50 per cent were taking assistance from maidservants. Twenty four per cent of them were getting assistance from their relatives. Of them 16 per cent were married and 6 per cent were widos(ers). The findings revealed that they had a thin connection with natal kins or relatives and secondly their immediate family members were not taking care of them.

Table 3

Living Status in Respect to their Marital Status

Marital Status	*Living Status*						*Total*
	Living with Children		*Living with Relative*		*Living with the Assistance of Maidservant*		
	M	*F*	*M*	*F*	*M*	*F*	
Unmarried/single	-	-	1(2%)	-	2(4%)	2(4%)	5(10%)
Married	14(28%)	4(8%)	8(16%)	-	6(12%)	2(4%)	34(68%)
Widow(er)	4(8%)	1(2%)	2(4%)	1(2%)	2(4%)	1(2%)	11(22%)
Total	18(36%)	5(10%)	11(22%)	1(2%)	10(20%)	5(10%)	50(100%)

Economic Status

The elderly persons, as found out in this study were employed in different job sectors. So, they were availing the social security measures provided by their employers. They were regular pension holders. For their supplement income they had their own savings under various schemes of the Government of India. As a consequence of this they were not financially dependent on their immediate family members or others. It is also a fact that no one of them was engaged in alternative income after their retirement.

Activities Performed in a Day (Good Morning to Good Night)

Their daily duties which they had to perform were varied according to their gender. The male elderly were generally performing the duty of daily marketing after awakening up in early morning. Then they usually spent time to read news papers. After 10 o'clock at morning they used to perform some official duties at bank or post office occasionally. Before taking lunch they used to perform religious prayer. After lunch they took rest and read books. In afternoon they used to join with their fellows of almost same age at a corner place of nearest market or railway platform of nearest railway station or in a temple located nearby to their locality. They usually used to spare 1–2 hours with some gossip of different subjects. At evening they used to watch television or read books before taking dinner and at 10–11 o'clock at night they used to go to sleep. They have limited scope to interact with their immediate members even with their grand children when they were living together because all of them were busy in their own work.

The female elderly were basically performing the duties of domestic help as usual in a family. They spare some hours with their grand children if they are living together. When daughter in laws out of home or gofor their jobs the took care of children. These elderly woman meet their fellows of same age group at the temple at evening session.

Both categories of the elders had a limited scope to get social engagement or going out because of the absence of supportive company of younger ones.

The elderly who are living with their relatives or alone with the assistance of their maidservants are passing their whole day in their house. They go for outing either in morning or evening. The day long stay in the house without any meaningful activity in quite painful. The mental state of loneliness and isolation is the caus of their physical illness with symptoms of anxiety and depression.

Social Network and their General Performance

The elder persons in this study had left their native place for their job in urban area and they constructed their houses in urban area. Friendships and neighbourhood relations which they enjoyed in childhood became thinner or were absent. Secondly their social world was reconstructed when they were in work place. But after retirement it was dissolved. Interestingly when they were in job they used to have new social interactions in their daily life. But it is no more after their retirement. During their working life they usually faced varied situations and people because of their transfer into different places.

After the retirement they have chance to meet a limited number of persons of same age who are in and around their residence. But the openness of interaction is too much interest bound, when they come close with other persons in a particular place in a particular time. This association is limited only to spare some time with native members or friends.

Some Suggestions

The study shows that the elderly of urban housing colony belong to the group of 1st generation in the urban area and they have a very thin relation with their native places. They had lifelong experiences with an education and they are also financially self dependent. But the modernization and the global system of the society has given birth to a new meaning of family and the relationship with the fellow members. The elderly people had their social world throughout their active life. Unfortunately the social world of these elder people was truncated after their retirement. They were leading a life in isolation and mental anxiety and depression.

In fact a person when reaching at the age of 60 years and above, he/she is officially reaching the age of retirement from their jobs. Age of retirement is a rule only. But it is not a policy of rejection of them as

being incapable in all respects. They have earned a huge experience throughout their life and they have a skill to guide the younger ones for their better and prosperous life. But negligence and isolation as well as disrespect are causing poor mental health and mental illness with various agonies.

In general there is no initiative to use this huge resource (experience of elderlies) for betterment of our society. The trend is to isolate them as they are unable to cope modernization. Neither they have chance to prove their ability nor they have their own initiative for this. So, the common view is that the retirement from employment means counting days for death.

Young people should realise that the experience of elderlies must be creatively used. This should also be realized that huge number of children are deprived of education because of their poor economy and parental inattention. So, a platform of the elderly might be promoted to use the skill and time for educational development of these children. The mental health of elderly population would also be improved when they would be able to spare their experience and time for betterment of the society.

Secondly there is no recreation facilities are provided by government or by society to these elderly persons. Going to temple is the only recreational activity for them. So, the setting up a common public library and community centre for retired persons in nearest location would be a step to help them develop close association with persons of same age group to pass their time usefully.

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