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Contents

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Quality of Life and Its Determinants among Older People Living in the Rural Community in Sri Lanka

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ABSTRACT

In recent decades, the proportion of people aged 60 years and above has increased rapidly in Sri Lanka. With this unprecedented increase, Sri Lanka faces great challenges in meeting the health and social needs of the older people. There is a paucity of information related to quality of life (QOL) and related factors among elderly in Sri Lanka. Therefore, this study planned to examine quality of life and its determinants among older people living in a rural community in Sri Lanka. This community based cross-sectional survey was conducted among a random sample of 336 old people aged 60 years and above living in the community. Respondents were interviewed individually using a structured interview questionnaire. QOL was measured by the Older People QOL questionnaire (OPQOL). Univariate and multivariate logistic regression analysis were used to determine the factors influencing QOL. The most agreed/strongly agreed response in OPQOL items was "religious, belief or faith is important to my QOL" (96.5%) and the most disagreed/strongly disagreed response was "I do not have enough money to pay for household repairs or help needed in the house" (85.4%). The standardized QOL score based on OPQOL was 63.86. The highest and the lowest standardized domain scores

were reported by the domains of 'home and neighborhood' (71.4) and 'financial circumstances' (51.8), respectively. Determinants of poor QOL among older people were living alone, poor family income, presence of chronic kidney diseases and poor self-rated health. This study provides baseline data on QOL among older people in the rural community in Sri Lanka. It is concluded that older people experience a moderate level of QOL and religion, which is an important aspect of QOL. Health and social workers can use these findings to plan appropriate interventions to improve QOL in community dwelling older people.

Key words: Quality of life, older people, determinants, Sri Lanka, Older People Quality of Life Questionnaire.

Population ageing is a global phenomenon in light of the demographic consequences of falling fertility rates combined with increases in life expectancy (World Health Organization, 2011) and as a result of the improvements in living standards, better nutrition, and decreased deaths from communicable diseases (Luo & Hu, 2011). It is well recognized that the increasing number of older people worldwide has become a global challenge. Sri Lanka is among one of the fastest ageing country in the developing world (World Bank, 2008). According to the recent census data by Department of Census and Statistics-Sri Lanka (DCSSL) (2012a), the elderly population aged 60 and over in 2012 was reported at 2.52 million, representing 12.4 per cent of the total population. The projection of the elderly population in Sri Lanka will be 4.5 million and 6.3 million in 2031 and 2061 respectively (De Silva, 2007). Being a developing country, Sri Lanka faces great challenges in meeting the health and social needs of the ageing population.

Ageing is characterized by progressive loss of adaptability (Evans, 2002). Usually, older people face diverse problems in their later lives, such as declining physical functions, increasing disability and chronic illnesses, changes in socio-economic status, social isolation and neglect, and loneliness (Victor, *et al.*, 2000; Browning & Thomas, 2013). It is well recognized that these factors negatively influence QOL of the elderly. Longevity leads to increasing demands on health care. Hence,

QOL is a very important aspect to examine for the well being of older people.

QOL is a very complex concept. It is also a multi-dimensional concept (Farquhar, 1995; Bowling & Gabriel, 2004; Baernholdt, *et al.*, 2012) and has been used to mean health status, physical functioning, symptoms, psychosocial adjustment, well-being, life satisfaction, and happiness (Ferrans, *et al.*, 2005). Ferrans and Power (1992) defined QOL as a person's sense of well-bein

g that stems from satisfaction or dissatisfaction with the areas of life that are important to him/her. WHOQOL Group (1993) defined QOL as individuals' perceptions 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. Bowling and Gabriel (2004) postulates that QOL is a multi-dimensional collection of objective and subjective areas of life, the parts of which can affect each other as well as the sum.

One of the major goals of the State Health Policy of Sri Lanka is improvement of QOL by advocating healthy lifestyle and reducing preventable diseases and disability (Ministry of Health Care and Nutrition-Sri Lanka, 2007). It further highlights elderly as the vulnerable group that need special attention. The government of Sri Lanka has launched several initiatives to improve QOL among the elderly. Among those are the establishment of a National Secretariat and a National Policy for older people, introducing an older person's identity card, establishment of elderly committees, establishment of day centres, and introducing a pension scheme for senior citizens aged 70 and over who do not get any kind of assistance and who have no family or relative to look after them (WHO, 2009). In addition, religious and cultural influences are being reinforced to treat older people respectfully and emphasizing the family's role in meeting their needs. However, the health care system faced different health-related problems like the high prevalence of non-communicable diseases (Wijesuriya, 1997; Nanayakkara, 2009; Rodrigo, *et al.*, 2013), lack of social security coverage, inadequacy in meeting the healthcare needs of the elderly, lack of resources and their inequitable distribution (World Bank, 2008), increasing old age dependency and poverty (Gaminiratne, 2004), and unavailability of geriatric care services at the hospital or at

the community level. The majority of population in Sri Lanka is in rural sector (77.4%) (DCSSL, 2012a) having comparatively poor facilities than urban parts in the country. Gaminrathna (2004) reported that poverty was more prevalent among older people in the rural sector. Moreover, the alteration of family structure from extended family to a nuclear family system reduces the traditional family support for older people (World Bank, 2008). Traditionally, females provide care for older people in Sri Lanka but this feature cannot be expected to continue because of the changing gender roles and female employment. Consequently, the health and well-being of older people in Sri Lanka has become a concern that directly impact on their QOL. However, QOL among older people living in the community in Sri Lanka is poorly examined.

Internationally, there are numerous studies on QOL and health-related QOL among older people. Studies have shown that different levels of QOL are experienced by elderly living in the community; poor QOL (Tajvar, *et al.*, 2008), moderate QOL (Naing, *et al.*, 2010; Devi & Roopa, 2013) and good QOL (Baernholdt *et al.*, 2012). As QOL is a multi-dimensional concept, it is determined by different factors. Recent studies conducted in different countries found that many socio-demographic characteristics were associated with QOL such as age, gender, marital status, education, living arrangement, working status and economic status (Hellstrom, *et al.*, 2004; Siop, *et al.,* 2008; De Belvis, *et al.,* 2008; Tajvar *et al.,* 2008; Naing *et al.,* 2010; Hoi, *et al.*, 2010; Dongre & Deshmukh, 2012). It is well recognized the negative impact of chronic illnesses on QOL among older people. Studies have shown that the number of chronic illnesses is associated with QOL (Lee, *et al.*, 2006; Luo & Hu, 2011) and hypertension, cardiac disease, neurological diseases, musculoskeletal problems, gastro-intestinal problems, arthritis, diabetes mellitus, asthma, chronic bronchitis, chronic obstructive pulmonary disease, cataract, chronic kidney diseases, liver diseases and hearing impairment have significant impact on QOL in older individuals (Dalton *et al.,* 2003; Arif, *et al.,* 2005; Hu, 2007; Sobhonslidsuk, *et al.*, 2008; Nanayakkara, 2009; Fujikawa, *et al.*, 2011; Liu, *et al.,* 2013;). Moreover, deterioration of functional abilities leads to dependency in old age and lowers QOL (Siop *et al.,* 2008). Studies have shown that

the differences in QOL and its influences between disabled and non-disabled older people (Avolio *et al.,* 2013) and disability is associated with poor QOL in older people (Groessl *et al.,* 2007; Baernholdt, 2012 *et al*). Self-rated health (SRH) is another important indicator associated with QOL and studies have shown that poor SRH is associated with poor QOL in the elderly (Gureje, *et al.,* 2008; Siop, *et al.,* 2008).

However, there are no studies conducted to investigate QOL and its related factors among older people living the community in Sri Lanka. Evidence is much needed to plan for interventions and to develop policies that promote health and well-being of older people. Therefore, this study aims to examine QOL and its determinants among older people residing in the rural community in Sri Lanka.

Method

Sample and Setting

This was a community based cross-sectional study[1] conducted in Talawa Divisional Secretariat Division, Sri Lanka. Thalawa is a rural Divisional Secretariat Division (sub-administrative units) located in Anuradhapura District in North Central Province, Sri Lanka. According to the census data by DCSSL (2012b), 94.1 per cent of people in Anuradhapura District live in the rural areas. The total elderly population aged 60 and over in Anuradhapura District was 78,820 representing 9.1 per cent of its total population. Sinhalese made up a majority ethnic group in the District (91%) and 90.1 per cent of people are Buddhists.

The sample size for this study was determined to measure mean score of QOL and the calculated sample size based on Birchall (2013) formula was 385. Non-responses in this study were assumed at 10 per cent, thus the required sample size was 424. The sampling method was based on a two-stage simple random sampling approach. In the first stage, six Grama Niladari divisions (smallest administrative units within Divisional Secretariat Division) were randomly selected from the list of Grama Niladari divisions in Thalawa Divisional Secretariat Division that consisted of 12 villages. In the second stage, 424 Sinhalese older people aged 60 and over were randomly selected using the 2013

electoral registers. The older people who were hospitalized or institutionalized, those with communication difficulties, those who were previously diagnosed with cognitive impairment or severe psychiatric disorders and those who refused to participate in the study were excluded. Out of the sampling size of 424, 402 older people were eligible for the interview. Twenty two people were excluded; 15 people were dead, six people had moved out of the area and one person was hospitalized. Moreover, 29 older people were not at home during the two home visits and three older people did not give their consent. Thus 370 people agreed to participate in the study. Out of 370 older people, 14 people were excluded; 12 older people had cognitive impairment or major psychiatric problems and two older people presented with communication difficulties. Finally, 356 respondents were interviewed.

Measurement

In the study, QOL was measured by the OPQOL (Bowling, 2009; Bowling & Stenner, 2010). This instrument has been validated in ethnically diverse community-dwelling older people in England. The OPQOL comprised 35 statements related to QOL under eight domains such as "life overall" (four items), "health" (four items), "social relationships" (five items), "independence, control over life and freedom" (four items), "home and neighborhood" (four items), "psychological and emotional well being" (four items), "financial circumstances" (four items) and "leisure, activities and religion" (six items). The participants were asked to indicate their response by choosing 1–5 possible options from the Likert Scale that range from strongly disagree to strongly agree. OPQOL items were coded as "1" for strongly agree, "2" for agree, "3" for neither agree nor disagree, "4" for disagree and "5" for strongly disagree. In scoring, reversed coding was accorded for positively worded items. The total score ranges from 35-worst possible QOL to 175-best possible QOL. OPQOL validity and reliability have been properly established (Bowling, 2009; Bowling & Stenner, 2010). Cronbach's alpha coefficient ranged from 0.748 to 0.901 across the sub-groups and a four-week test-retest reliability coefficient ranged from 0.403 to 0.782. The construct validity was indicated by moderate to strong correlations among OPQOL, WHOQOL-OLD and CASP–19 with a Spearman's rank correlation

ranging from 0.380 to 0.732. The Cronbach's alpha coefficient of modified Chinese version of OPQOL was 0.90 (Chen, *et al.*, 2014). In this study, Cronbach's alpha reliability showed 0.862.

The independent variables consisted of socio-demographic characteristics, self-reported chronic medical problems, functional status and SRH. Age, gender, marital status, educational level, living arrangement, employment status and monthly family income were included under the socio-demographic variables. For chronic medical problems, hypertension, cardiac diseases, diabetes mellitus, arthritis, neurologic problems, asthma, chronic bronchitis, chronic obstructive pulmonary diseases, cataract and vision problems, chronic kidney diseases, chronic liver diseases, hearing impairment and cancers were included. Functional status was determined by two scales: activities of daily living (ADL) scale and instrumental activities of daily living (IADL) scale. The ADL scale consisted of six items: bathing, dressing, toileting, transferring, continence, and feeding, which were originally included in the Katz Index of ADL scale (Katz, *et al.*, 1963). The IADL scale consisted of eight items: ability to use the telephone, shopping, food preparation, housekeeping, doing laundry, mode of transportation, responsibility of own medication and ability to handle finances which were originally included in the Lawton IADL scale (Lawton & Brody, 1969). In this study, the older people who did not receive any help in performing ADL or IADL were classified as "independent" while those who received partial help from others were classified as "need assistance". Older people who were totally dependent on performing any ADL or IADL functions were classified as "totally dependent". Disability is defined as any difficulty in performing ADL or IADL in this study. To assess the level of disabilities, "need assistance" and "totally dependent" were merged and coded into "disability" and zero mark was allocated to disability category. The "independent" category was retained and corresponded score was one. Maximum score in the combined scale was 14 that indicated independence in ADL and IADL (ADL/IADL independency). SRH was measured by the single global question "How would you rate your current health?" on a five point scale from very poor to excellent.

Instrument

The research instrument was a structured questionnaire designed with five sections based on the extensive literature review consisting of independent and dependents variables namely (1) socio-demographic questionnaire, (2) self-reported medical problems, (3) functional status, (4) SRH and (5) QOL. This structured questionnaire was assessed for content validity by two experts. The questionnaire originally designed in English was translated into Sinhala (local language of Sinhalese) and followed by back-to-back translation. Translations were done by two university lecturers who are native Sinhalese speakers fluent in English. The questionnaire was tested for reliability and cultural sensitivity by pretesting in the pilot study among 30 older people who had similar characteristics with those of the study population. Based on the results of the study, minor changes were done for the items in the questionnaire. Cronbach's Alpha reliability test was performed and Cronbach's Alpha coefficient for OPQOL was 0.834, which indicated good internal consistency. In addition, ADL and IADL scales showed Cronbach's Alpha coefficients 0.910 and 0.870 respectively. The Sinhala version of the instrument was used in this study.

Data Collection

Data collection was conducted over a period of three months between April to July in 2014. The participants who fulfill the inclusion criteria and consented to the study were interviewed by the principal investigator and two trained interviewers. After explaining the purpose and procedure of data collection, older people were invited to participate in this study. Once agreed, they were asked to sign the consent form. Upon consent form was signed, the participants were interviewed at their homes. For those who were not available for interview during the first home visit, a second visit was done.

Data Analysis

All the data collected were analysed using Statistical Package for Social Sciences version 20 for windows. In the analysis, 336 responses were included. Twenty respondents were excluded due to the missing data on monthly family income. Descriptive statistics were used to characterize the sample based on socio-demographic data, self-reported

medical problems, functional status, SRH and QOL. The findings were described using frequencies and percentages, mean, standard deviation and standardized scores (mean score/the highest total possible score x 100). The determinants of QOL were identified by univariate and multivariate logistic regression. Univariate logistic regression was performed to evaluate the statistically significant effects (p-value < 0.05) of study variables on QOL. In the determination of QOL, the mean score was considered as the cut-off point and it was transformed to a dichotomous category as "good QOL" (had a score above mean score) and "poor QOL" (had a score below mean score). All independent variables statistically significant in univariate analysis were entered simultaneously into a binary logistic regression model. Reference category in QOL was poor QOL. All covariates were binary coded. Alpha level of significance was set at < 0.05.

For analytical purposes, arthritis and musculoskeletal diseases were combined into one category as "arthritis/musculoskeletal problems" while asthma, chronic bronchitis and chronic obstructive pulmonary diseases were combined into one category as "respiratory problems". Due to the small number of respondents for cancer, it was combined with gastrointestinal problems.

Results

The total sample consisted of 336 older people aged 60 and over, ranging in age from 60 years to 98 years. The mean age of the sample was 68.19 years (SD ± 6.99) and the majority of the respondents were aged between 60–69 years old (63.7%). The sample represented slightly more males (51.2%) than female respondents. The majority of the respondents was married (63.1%), had received a secondary level education (52.1%), living with spouse and/or children (86.9%) and non-employed during the study period (72.9%). The mean monthly family income was Rs 20,647.59 (SD ±17,931.32) and mode of Rs 5,000.00. One hundred and ninety seven respondents (58.6%) reported monthly family income above the national poverty line. Out of the 336 respondents, 48 respondents (14.3%) did not report any chronic medical problem. The most prevalent chronic medical problem was cataract/vision impairment (53.9%). None of the respondents reported chronic liver diseases. Most of the respondents reported

ADL/IADL disability (80.4%). The majority of the respondents rated their health as 'poor/very poor' 39.6 per cent (Table 1).

Table 1

Distribution of Socio-demographic Characteristics, Chronic Medical Problems, Functional Disability and SRH Among Respondents (n = 336)

Study Variable	n	%	Mean (SD)
Age			68.19 ($\pm$6. 99)
60–69 years	214	63.7	
70–79 years	95	28.3	
80 years and above	27	8	
Gender			
Male	172	51.2	
Female	164	48.8	
Marital Status			
Married	212	63.1	
Never married	7	2.1	
Divorced	3	0.9	
Widowed	114	33.9	
Education			
No formal education	38	11.3	
Primary education	115	34.2	
Secondary education	175	52.1	
Tertiary education	8	2.4	
Living arrangement			
Living alone	26	7.7	
Living with spouse and/or children	292	86.9	
Living with others	18	5.4	
Employment status			
Presently employed	91	27.1	
Presently un-employed	245	72.9	
Monthly family income			20,647.59($\pm$17, 931.32)
Below the national poverty line	139	41.4	
Above the national poverty line	197	58.6	
Number of chronic medical problems			1.93($\pm$1.42)
None	48	14.3	

Cont'd...

Cont'd...

One disease	98	29.1
Two to three diseases	140	41.7
More than three diseases	50	14.9
Presence of chronic medical problems*		
Cataract/vision impairment	181	53.9
Hypertension	102	30.4
Arthritis	55	16.4
Diabetic mellitus	51	15.2
Heart diseases	42	12.5
Neurologic problems	41	12.2
Asthma	37	11
Hearing impairment	31	9.2
Gastrointestinal diseases	26	7.7
Chronic kidney disease	18	5.4
Bone and muscle disorders	15	4.5
Cancers	8	2.4
Chronic bronchitis	7	2.1
Chronic obstructive pulmonary disease	2	0.6
Others	31	9.2
ADL/IADL disability		
Absent	66	19.6
Present	270	80.4
SRH		
Excellent/good	86	25.6
Fair	117	34.8
Poor/very poor	133	39.6

* Multiple responses

The most strongly agreed/agreed responses in OPQOL were 'religion, belief or philosophy is important to my QOL' (96.5%), followed by 'I feel safe where I live' (90.8%) 'I have someone who gives me love and affection' (90.8%) and 'culture/religious events/festivals are important in my QOL' (85.1%). Most of the respondents disagreed or strongly disagreed with they did not have enough money to pay for household repairs or help needed in the house (85.4%). The mean OPQOL score was 111.76 (SD $\pm$ 14.7) out of a possible score of 175, ranging in total score from 67 to 152. The standardized score of the

OPQOL was 63.68. In relation to specific sub-scale, the domain of 'home and neighbourhood' (71.4) and 'psychological wellbeing' (69) reported high standardized domain score and the domain of 'financial circumstances' (51.8) and 'health' (55.9) reported the lower standardized domain score (Table 2).

Table 2
Distribution of Mean and Standardized OPQOL Scores Among Respondents

	Mean ± SD	Standardized Score
Total QOL score	111.76 ± 14.69	63.86
Domain scores		
Life overall	12.39 ± 2.89	61.95
Health	11.18 ± 3.90	55.90
Social relationship	16.50 ± 2.40	66.00
Independence	12.41 ± 2.59	62.05
Home and neighbourhood	14.82 ± 1.98	71.40
Psychological well-being	13.80 ± 2.57	69.00
Financial circumstances	10.36 ± 3.20	51.80
Leisure, religion	20.30 ± 2.87	67.67

Univariate analysis showed that QOL was significantly associated with age, education, living arrangement, monthly family income, number of chronic medical problems, hypertension, arthritis/musculoskeletal problems, neurological problems, respiratory diseases, cataract/vision problems, chronic kidney diseases, ADL/IADL disability and SRH. There was no significant association between QOL with gender, marital status, employment status, diabetes mellitus, gastrointestinal diseases/cancer and hearing impairment. All significantly associated factors with QOL in the univariate analysis were entered into binary logistic regression model and it demonstrated that living arrangement (OR = 3.502, CI: 1.143–10.727), family income (OR = 3.407, CI: 1.931–6.008), chronic kidney disease (OR = 6.849, CI: 1.178–39.840) and SRH (OR = 4.974, CI: 2.695–9.179) were the significant determinants of QOL of the elderly (Table 3). The Hosmer and Lemeshow goodness-of-fit test showed the non-significant p value (df = 8, p = 0.214) indicating the well-fitting model.

Table 3
Determinants of QOL among Older People (n = 336)

Independent Variables	Logistic regression analysis		p Value
	Univariate	Multivariate	
	P value	OR (95% CI)	
Age	0.015	0.916 (0.503, 1.668)	0.773
Education	<0.001	1.505 (0.828, 2.736)	0.180
Living arrangement	0.045	3.502 (1.143, 10.727)	0.028
Monthly family income	<0.001	3.407 (1.931, 6.008)	<0.001
Number of medical problems	<0.001	1.218(0.430, 3.454)	0.710
Hypertension	<0.001	1.198(0.627, 2.290)	0.585
Heart diseases	0.013	2.256 (0.917, 5.552)	0.077
Arthritis/musculoskeletal problems	<0.001	1.549 (0.758, 3.166)	0.230
Neurological problems	0.003	1.444 (0.594, 3.509)	0.417
Respiratory problems	0.006	1.879 (0.815, 4.331)	0.139
Cataract/vision impairment	<0.001	1.843 (0.975, 3.483)	0.060
Chronic kidney disease	0.002	6.849 (1.178, 39.840)	0.032
ADL/IADL disability	<0.001	1.573 (0.696, 3.552)	0.276
SRH	<0.001	4.974 (2.695, 9.179)	<0.001
Constant	.056	<0.001	

P Value < 0.05; Multiple logistic regression analysis: Score test ($x^2 = 137.591$, df = 14, P = <0.001); Hosmer and Lemeshow test–0.214; Nagelkerke R^2 Square = 0.449

Discussion

This cross-sectional study examined QOL and its determinants in a sample of older people living in a rural community in Sri Lanka. The standardized QOL score based on OPQOL was 63.86, which means that QOL among older people is not high. This finding suggests that QOL among older people in the selected community is at a moderate level. This might be attributed mainly to the practice of Buddhism as the majority of the Sinhalese are Buddhists. There is a close link between religion and parent-children relationship, and looking after parents and respecting older people are meritorious deeds. According to Buddhism, it is not easy to repay the fathomless and boundless kindness of the parents (Kim & Sung, 2011). Buddhism is unique in the

practice of filial piety and children are duty-bound to care for their parents extending to them filial obligation (Ibid.). This religious background reinforces the retaining and caring the older people within the family. Our study showed that majority of older people lived with their spouses and/or children (86.9%) and the proportion of older people living alone was low. When considering the individual items in OPQOL, 96.5 per cent respondents said that religion, belief or philosophy is important to their QOL while 85.1 per cent respondents said that culture/religious events/festivals are important. Therefore, religion and culture have an important role in QOL among older people. Moreover, most of the respondents said that they have someone who gives love and affection, and their living environment is safe. These factors might give the feeling of safety among older people and optimize in the psychological well-being. Our findings showed that the domains of 'home and neighborhood' and 'psychological well-being' are the two dimensions that scored relatively good QOL.

Our results indicated that the score in domains of financial circumstance and health were low. About 41 per cent of respondents had their family income below the national poverty line. The national poverty headcount ratio for Sri Lanka was 7.6 for 2012/2013 (DCSSL, 2014). Our result is inconsistent with the above national figure indicating a high prevalence of poverty. Gaminirathna (2004) also reported that poverty among older people was higher in rural parts than urban areas. This study found that the health status of older people was poor. Only one fourth of respondents rated their health as good/excellent and it was supported by the findings of a national survey conducted in Sri Lanka, where it found that the majority of elderly rated their health as poor/fair (Ostbye, *et al.*, 2009).

The QOL findings of this study were similar with two studies conducted in India and Myanmar. Devi and Roopa (2013) conducted a survey to compare QOL among institutionalized and non-institutionalized older people in Urban Bangalore district in India and they found that the majority of the respondents (60% of men and 59.5% of women) had moderate level of QOL in non-institutionalized setting. The study in Myanmar also found that the older people living in the community reported moderate level of QOL in Irrawaddy division, Myanmar (Naing, *et al.,* 2010). Sri Lanka, India and Myanmar

are developing countries located in the Asian Region that share the common features in Asian Culture and this similarity may be due to the similar socio-economic and cultural backgrounds.

In this study, we found that living arrangement was a determinant of QOL among older people and the respondents who lived alone experienced poor QOL than those who lived with spouse/children/others. This finding is similar with a study conducted by Hellstrom *et al.,* (2004) who reported that living alone was a predictor of poor QOL among older people living at home who need assistance. Lin, *et al.*, (2008) also reported that older people living alone experienced poor QOL. Living alone is associated with loneliness, poor psychological well-being and depression (Fukunaga, *et al.,* 2012; Lim & Kua, 2011). This finding raises the need for attention towards the older people who are living alone in Sri Lanka.

Another significant determinant of poor QOL among older people was poor family income. This finding is consistent with studies conducted in other countries (Siop, *et al.,* 2008; Tajvar *et al.,* 2008). It is true that lack of sufficient financial resources is highly linked with poverty and poor social status. Studies have shown that poverty is associated with health inequalities (Zimmer, 2008) , perceived economic stress and psychological distress among the people (Thanakwang, 2013). The older people are at higher risk for the consequences of poverty, especially in a country where no social security or disability pension is available (Gureje, *et al.,* 2008). According to Engelhardt and Gruber (2004), social security benefits have an important role and it can significantly alter the poverty of elderly. In Sri Lanka, there is no compulsory social security system for all older persons. Therefore, these issues should be taken into account by relevant stakeholders and raises the need for income generation activities and welfare aids for low income people in the community.

Our findings indicated that chronic kidney disease was the only chronic medical illness that predicts poor QOL in old age. The present study was conducted in North Central Province and in this region; chronic kidney disease of uncertain etiology has increased markedly over the past 15–20 years (Nanayakkara, *et al.,* 2012). This is a major

health care problem in the North Central Province of Sri Lanka and mainly affects males from poor socio-economic backgrounds who are involved in paddy farming (Wanigasuriya, 2012). It is essential to pay special attention on QOL among older people with chronic kidney diseases in Sri Lanka.

Finally, this study found that SRH was an important determinant of QOL in old age and it reported that those who perceived poor SRH experienced poor QOL. This result is consistent with the findings of two studies conducted in Malaysia and Nigeria (Gureje, *et al.,* 2008; Siop, *et al.,* 2008) and they reported that SRH as a strong correlate with QOL among older people living in the community. SRH encompasses the broad view about health among people; therefore attention is much needed towards issues related to poor health status among older people to enhance their health and well-being.

There were several limitations in this study. This is a cross-sectional study and it does not help to establish a causal relationship among the variables. Inclusion and exclusion criteria of this study may reduce the representativeness of the sample. We selected few factors related to QOL and did not assess the relationship between QOL with other known influencing factors like health behaviors, depression, loneliness and social support. Since this was a small scale study in a rural part of the country, the findings cannot be generalized to the entire older population in Sri Lanka.

Conclusion

The findings of this study indicate that the majority of the older people experience a moderate level of QOL in the Talawa Divisional Secretariat Division, Sri Lanka. Religion is a very important aspect in QOL among older people. Comparatively, good QOL is reported in the domains of 'home and neighborhood' and 'psychological well-being' while lower QOL is reported in the domains of 'financial circumstances' and 'health'. Living alone, poor family income, presence of chronic kidney disease and poor SRH are the determinants of poor QOL among the older people.

Implication for Practice, Policy and Research

These findings may have significant implications for healthcare professionals, social workers and policy makers to be cognizant of QOL and related factors among older people in Sri Lanka. The findings can be used by health care professionals in planning appropriate interventions for older people. Health screening, health education and health promoting activities could be expanded. As poor health status is a significant issue, the establishment of community geriatric service mainly focusing on nursing care would help older people to meet their health needs at primary care setting. Among the variables, chronic kidney disease is the only disease that predicts poor QOL among elderly. Health care providers need to pay serious attention towards this increasing health problem in the agricultural community. Income generation activities and welfare aids for families are essential to improve QOL among older people. It is essential to study on older people who are living alone in the community. In future studies, the qualitative approach as well as large scale longitudinal studies may be helpful to best explain the QOL among older people in Sri Lanka.

Note

1. This study was approved by the Research and Ethics Committee of the Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak, Malaysia and the Ethical Review Committee, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka. Permission to conduct this study in the community was obtained from Divisional Secretary, Thalawa. Written informed consent was signed by all the participants prior to data collection.

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Assessing the Life Satisfaction of Elderly Living in Old Age Homes in the City of Ahmedabad

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ABSTRACT

The present study was planned to find out the quality of life and the coping strategies of the inmates of old age homes in the city of Ahmedabad. 50 inmates (Male=33, Female=17) from five old age Homes, were selected through the random sampling method. The elderly subjects were interviewed individually to find out the reasons for coming to live in old age homes and to know their views about the living conditions and their coping strategy in the new environment. The findings of this study revealed that the majority of the elderly people did not get respect, love and affection from their family members and were highly dissatisfied with the behaviour their children. They were considered as a burden by the family members. The respondents were of the view that in old age when health deteriorates and person is unable to work his self respect is badly hurt.

Key words: Elderly, Coping strategies, Isolation, Life satisfaction.

There has been a significant change in the Indian economy and family system during the last five decades. Specifically, more and more Indian joint families are turning into nuclear families. The nuclear families are actually nothing but extended nuclear families with one or

more members related to the spouse or parents and grandparents living in the family. Thus, the status of old age people has also changed in the present family system. In the earlier days, the elderly members were treated with regard for their experience and wisdom and generally had the ultimate decision-making power in important family issues. However, this situation is gradually changing for the worse for the elderly persons, particularly; those who have retired from service and other occupations. There are increasing numbers of instances of such being emotionally, economically, mentally, and psychologically isolated by their younger family members. Further, the feeling of loneliness, along with the natural age related decline in physical and physiological functioning, makes them more prone to psychological disorders (Ghosh, 2006). In some cases, even elderly persons with relatively rich families or aged persons who have nobody to look after takes shelter in old age homes. These elderly have no alternative but to live alone or away from their children.

Context of the Study

Changes in population structure will have several implications on the health, economy, security, family life, well-being and quality of life of the elderly. Quality of life is a holistic approach that not only impacts the individuals' physical, psychological, and spiritual functioning, but also their connections with their environments; and opportunities for maintaining and enhancing skills (Barua, 2007). The process of ageing brings with itself the challenge of having to provide care to a large number of older persons. Subjective quality of life can defined in terms of well-being, happiness, and satisfaction, etc. satisfaction with life is used in the sense of overall positive assessment by the individual concerned (Anastasia, 2003).

The term 'Life Satisfaction' has been confused with the concepts of happiness, psychological well-being, and adjustment. These terms were used and prescribed by various scholars in different research studies. The term life satisfaction is defined as "The way persons feel about their daily activities, their responsibilities, the meaning of their life, the achievement of goals, having a positive ego, regarding themselves as valuable, and keeping an optimistic attitude" (Kim, 1996).

Generally satisfaction is assumed and expected to decline in older age; most notably as physical and health conditions deteriorate (Sung, 2003). The level of satisfaction of any individual is determined by subjectively evaluating how much a person is satisfied with his own life. The review of studies indicates that the factors of dimensions of health, happiness of family, interrelationship with sons and daughters and economic status of family have a great effect on the life satisfaction of elderly people (Kim, *et al.*, 1999; Park, 1988). The study of life satisfaction in the elderly is an important subject of study because a successful ageing process is regarded as an index of life satisfaction of the old, but the study of the aged in institutions is still unsatisfactory in the Indian context.

It was seen that many of the respondents living in ashrams or old age homes took refuge in religion as a coping strategy. On the other hand, the study by Ushasree (2009) indicates that those living in ashrams without family member support were following non-religious coping means to divert their minds from health problems than those living with their family members. The study conducted by Das (2004) brings out that there is a degree of concern for the elderly in the country. This is reflected in the adoption of a recent National Policy on Older Persons in 1999, which has identified principal areas of intervention and action strategies. Although many legal aids are available to these elderly people (like the old age pension schemes of Central and State governments), the elderly, being a part of Indian society, which emphasises on high moral values, love and affection, there are hardly any provisions which enjoin upon the children to take better care of their aged parents. No wonder, many elderly persons seek the support and assistance of old age homes where the inmates are at least assured of facilities like food, clothing, and shelter (UNFPA, 2012).

It is seen that the elderly in old age homes have poor adjustment abilities compared to their counterparts who are still staying with their family members (Minal and Kamala, 1995). Similarly, it was also observed that feeling of loneliness is more in institutionalised elderly people, whereas social support had a higher mean score for non-institutionalised elderly people (Priya, 1998). At the same time, the study by Srivastava (2002) indicates that in the different emotional states the mean scores of anxiety, depression, and guilt of elderly

people living in institutions were higher than the mean scores on these parameters of the elderly living with their children. As an interpretation of these findings it may be said that elderly people who demonstrate a tendency towards external locus of control have higher level of satisfaction and vice-versa. This is mainly due to the fact that elderly people who are externally focused and who have developed trust in their health care provider actually demonstrate higher levels of satisfaction than those who rely on themselves or depend on old age homes. As a result the second group may experience more guilt or feeling of hopelessness when faced with poor treatment.

In summary, review of studies on life satisfaction among old age people have shown that emotional states like anxiety, depression and guilt were more and social and emotional support were very less among the elderly living in institutions.

Objectives of the Study

1. To find out the reasons behind elderly people leaving their children and living in old age homes.
2. To assess the life satisfaction of elderly people living in old age homes and the coping strategies adopted by them.

Methodology

Sample

The elderly people living in old aged homes of Ahmadabad constituted the population of the research. Gujarat has a total of 57 old aged homes out of which 10 are in Ahmedabad. After listing the number of old age homes in Ahmedabad, the researchers randomly selected 50 inmates (Male = 33, Female = 17) from five old age homes. 60 per cent elderly were living in 'pay and stay' type old age homes. Their children were paying their expenses.

Method

A semi-structured interview schedule was used to find out the views of respondents. These respondents were interviewed individually. The researcher took utmost care to make it as convenient as possible for the respondents. In addition, the researchers were able to explain or rephrase the questions if the respondents were unable to

understand the questions. The respondents were put at ease by giving them option of not answering the questions with which they were uncomfortable. For analysing the data, the researcher used both quantitative and qualitative data analyses. For analysing the quantitative data, frequency, cross tabulations were used, while for analysing the qualitative data, narrative analysis of the respondents were used.

Results and Discussion

Profile of the Respondents

The social demographic characteristics of the respondents are presented in Table 1. The percentage of male and female respondents was 66 and 34 respectively. The majority of the respondent's (48%) were in the age group of 66–70. Similarly, when the age category of the respondents was related to their gender, it was found that there was higher number of female respondents in the age group of 66–70 years and less number in the age group of above 70 years as compared with their male counter parts. Majority of the respondents of the study were found to be hailing from urban areas.

Table 1
Demographic Profile of the Respondents

	Variables	Male (N=33) n % (66)	Female (N=17) n % (34)	Total (N=50) n % (100)
Age	61–65	11 (22)	6 (12)	17 (34)
	66–70	9 (18)	15 (30)	24 (48)
	70+	7 (14)	2 (4)	9 (18)
Caste	General	07 (14)	03 (06)	10 (20)
	OBC	19 (38)	12 (24)	31 (62)
	SC	05 (10)	02 (04)	07 (14)
	ST	02 (04)	0 (00)	02 (04)
Place of living	Urban	25 (50)	12 (24)	37 (74)
	Rural	08 (16)	05 (10)	13 (26)

Socio-economic Status of the Respondents

It was also seen that majority (36%) of the respondents had higher secondary education. It was seen that proportion of graduate male respondents was much more than that of their female counterparts.

The table also brought out that nearly 42 per cent of respondents were having 6–9 members in their family, which indicates that majority of them were from joint families. It was also seen that the majority (42%) of respondents had worked in the public sector. As regards marital status, 62 per cent of were married and 24 per cent, widowed. A very negligible number of the respondents were unmarried. Similarly, it was also observed that very few numbers of respondents were getting more than Rs 3 lakhs salary per annual. Table 2 presents the distribution of socio-economic status of the respondents.

Table 2
Socio-Economic Status of the Respondents

Variables		Male (N=33) n % (66)	Female (N=17) n % (34)	Total (N=50) n % (100)
Educational status	Primary	9 (18)	6 (12)	15 (30)
	Secondary	7 (14)	11 (22)	18 (36)
	Graduation	13 (26)	4 (8)	17 (34)
Marital status	Married	24 (48)	11 (22)	31 (62)
	Unmarried	5 (10)	2 (4)	7 (14)
	Widow/or	7 (14)	5 (10)	12 (24)
No. of family members	2–5	09 (18)	03 (06)	12 (24)
	6–9	14 (28)	07 (14)	21 (42)
	10–13	08 (16)	04 (08)	12 (24)
	14 above	02 (04)	03	05 (10)
Occupation	Public	16 (32)	5 (10)	21 (42)
	Private	13 (26)	2 (4)	15 (30)
	Other	3 (6)	11 (22)	14 (24)
Income (Annually)	Less than 1 Lakh	08 (16)	12 (24)	20 (40)
	1 lakh to 3 Lakhs	16 (32)	05 (10)	21 (42)
	Above 3 Lakhs	09 (18)	00 (00)	09 (18)

Reasons for Staying in Old Age Homes

Table 3 given below depicts the reasons for the respondents staying in the old age homes. It can be seen that the largest number (28%) of the respondents cited 'Conflict with in the family'. The second position was occupied by 'Nobody to take care of them' (24%),

followed by 'Family Feud' (22%) and 'Lack of Peace and health conditions at home (18%). A very striking fact that emerged was that a noticeable percentage (8%) of the respondents did not disclose the reasons for their staying in these homes. This suggests the charitable nature of such persons who, despite being cheated or ill-treated by their younger relatives, were reluctant to speak 'ill' about them. Maybe they were also reluctant to disclose embarrassing family secrets to unknown.

Table 3
Reasons for Staying in Old Age Homes

Reasons to Stay Here	*No of Respondent's*	*% of Respondents*
Conflict within the family	*14*	*28*
Lack of peace and healthy conditions at home	*9*	*18*
Family Feud	*11*	*22*
Nobody to take Care	*12*	*24*
Not disclosed	*4*	*8*
Total	*50*	*100*

Living and Health Conditions of Elderly at Old Age Homes

Table 4 brings out that the maximum numbers of elderly, i.e., 38 per cent, have been living in old age homes for a period between 1 to 2 years, followed by 36 per cent for less than 6 months and lastly the smallest group comprising of 26 per cent member who are residing in old age homes from 7–12 months. Majority of the male respondents were staying alone in the old age homes as compared with their female counterparts. The researcher found that in all the old age homes studied, the nature of admission was not free but paid. The elderly residing at these old age homes were required to pay a fixed amount every month. This is a little amazing, because the elementary idea behind setting up of old age homes is to provide free care to elderly persons stranded without family care and support.

The table indicates that only 34 per cent of them were economically independent for their day-to-day expenses. This is mainly due to the fact they were getting pension from government, while rest of

them were partially or completely dependent on either old age homes or their children. The table also presents the health status of respondents. The problems of hypertension, low vision, hearing and Neurological problems, diabetics and other serious health issues were 72 per cent, 78 per cent, 64 per cent and 82 per centnstances respectively. The prevalence of health problems was more among females, as compared to males. Further, it was also identified from the respondent's narratives that majority of the respondents, i.e., 46 per cent, sought treatment at hospitals while 27 per cent preferred were going to clinics and the rest did not prefer to consult any one. This is mainly due to lack of financial support from family members or the respondents accepting their medical condition due to issues like old age.

Table 4
Living and Health Conditions of the Inmates of Old Age Homes

	Variables	Male (N=33) n %	Female (N=17) n %	Total (N=50) n %
Duration of stay	< 6 months	13 (26)	5 (10)	18 (36)
	7–12 months	9 (18)	4 (8)	13 (26)
	1–2 years	11 (22)	8 (16)	19 (38)
Living arrangements	With Spouse	7 (14)	5 (10)	12 (24)
	Alone	26 (52)	12 (24)	38 (76)
Economic dependence	Independent	12 (24)	5 (10)	17 (34)
	Partly dependent	8 (16)	3 (06)	11 (22)
	Dependent	7 (14)	15 (30)	22 (44)
Health status	Hypertension	28 (78)	8 (22)	36 (72)
	Low vision and hearing problem	22 (56)	15 (44)	39 (78)
	Neurological problems	19 (59)	13 (41)	32 (64)
	Diabetes and other health problems	26 (63)	13 (37)	41 (82)

Social and Emotional Support for the Elderly at Old Age Homes

An individual's social support system comprises multiple networks and various relations that include family, relatives, friends and neighbours. The ageing experience of older people is largely influenced by the degree they are embedded in social support networks.

From the above Table, it can be seen that children of 48 per cent of the respondents visit the old age homes on a monthly basis. A very noticeable fact that emerged is that children of 22 per cent of respondents do not visit them at all. A similar trend of 'neglect' was noticed from close relatives – in nearly 60 per cent cases, no one was visiting the inmates.

Table 5

Visits to Parents at Old Age Homes

Visits	Visits to Parents at Old Age Home				Total
	Monthly	Once in a Week	Special Occasions	Not Visiting	
Children's visit	24 (48)	9 (18)	6 (12)	11 (22)	50 (100)
Close Relative visit	6 (12)	-	15 (30)	29 (58)	50 (100)
Elderly visit to their Children homes	16 (32)	4 (8)	18 (36)	12 (24)	50 (100)

The above discussed the visits of children/close relatives to the of old age homes. What was the trend about the elderly visiting the homes of their children? A more positive picture emerged here. A significant number of respondents stated that they visited on: special occasions (36%) and on a monthly basis (32%). However, nearly 25 per cent of the respondents were not visiting the homes of their children. The study conducted by Zink, (1994) suggests that social support becomes a significant source of help for older people, particularly those living with chronic illnesses and acts as a buffer and alters recovery patterns. However, the current study brings out a low level of social support, care and emotional attachment of children with their own parents. A major reason behind less frequent visits by the elderly that the researchers came across was the apathetic nature or lack of interest from the side of the children. They themselves are not too concerned whether their parents come to see them or not. It was understood from the narratives of respondents that many of them opined that after a point in life the level of integration with their siblings and extended family subsides, even when the elderly would like to get more emotional support, but in practice their desires are not

fulfilled. It was also noted, some old age homes had fixed visiting hours. However, in majority of the old age homes, there were no time restrictions and relatives could come to visit anytime. Thus, restricted visiting hours could not be cited as a reason for the children/close relatives not 'looking up' the inmates more frequently.

Coping Strategies Used by Elderly People in Old Age Homes

The table given below presents the different coping strategies being adopted by the respondents. The most popular strategies for keeping a positive frame of mind were: meditation, worshiping god, engaging in physical exercises, taking a rest or going on a vacation. It is commonly believed that elderly tend to spend more time for religious activities which provides a sort of social support in the form of personal contact with other people at religious gatherings with whom they could share their thoughts. Respondents, here, appeared to be generally very pragmatic. This is evident from the low priority accorded to escapist and fatalistic means like 'Avoiding contact with others' (26%) and 'Blaming one's fate (18%). A very heartening feature is the independent-mindedness exhibited by majority of the respondents. This is evident from the relatively high priority accorded to positive strategies: 'Take a rest, go on a vacation (78%); 'Double the efforts to overcome the problem' (74%); 'Engage in vigorous physical exercise and meditation daily' (72%); 'Talk about the issue to a family member who can do something concrete about this' (64%) and 'Prepare yourself for the worst' (56%). It may be said that the respondents this study did not feel lonely in the environment of old age home, since they were engaged in a multitude of tasks and using various coping strategies in old age homes.

Table 6

Coping Strategies Used by Elderly People in Old Age Homes

S. No.	Statements	Yes (%)	No (%)
1.	Compare your problems with that of others and feel that you are better off	66	34
2.	Visit places of worship, go on a pilgrimage	58	42
3.	Engage in vigorous physical exercise and meditation daily	72	28

Cont'd...

Cont'd...

4.	Blame your fate; sometimes you just have bad luck	18	82
5.	Come up with a couple of different solutions to the problem	44	56
6.	Avoid being with people, seek complete isolation	26	74
7.	Prepare yourself for the worst to come	56	44
8.	You know what has to be done. So you double your efforts and try harder to make things work.	74	26
9.	Talk to a family member who can do something concrete about the problem.	64	36
10.	Get away from things for a while; take a rest or a vacation.	78	22

Life Satisfaction of Elderly at Old Age Homes

Life satisfaction among the elderly has become an important issue in geriatric care. The review of research studies shows that it is affected by various physical, emotional, social and mental conditions (Ko, 1995; Kim, 1996). The results of life satisfaction of elderly those who are living at old age homes are presented in Table 7.

Table 7
Satisfaction of Life at Old Age Home

Age Category	Satisfaction of Life at Old Age Home			Total
	Not Satisfied	*Neutral*	*Satisfied*	
61–65	5 (30)	8 (47)	4 (23)	17 (100)
66–70	8 (33)	10 (42)	6 (25)	24 (100)
70+	5 (56)	3 (33)	1 (11)	9 (100)
Total	18 (36)	21 (42)	11 (22)	50 (100)

It can be seen from the Table that, even on this parameter, there is an overall tendency to accept things as they are, since the largest number in the two age brackets 61 to 65 and 66 to 70, and overall, gave 'Neutral' response regarding their satisfaction levels. However, the largest number of respondents in the above 70 years age bracket gave a categorical 'Not satisfied' response on this issue. It is also noteworthy

that for all the age brackets, and overall, the 'Not satisfied' response were more than the 'Satisfied' response. Even though most inmates were not satisfied with the conditions in the old age homes, they are forced to stay there, obviously for want of a better alternative. This finding is in tune with that of Litwin and Shiovitz (2006) which indicates that many of the elderly prefer to stay in old age homes, despite their low level of satisfaction. This is mainly due to that fact that many of them had stressful family relations and lack of family care which forces them to seek 'refuge' in old age homes. Further, life satisfaction is affected by their role in their family, their socio-economic and health conditions, and the frequency of meeting they have with their children living far away (Kim, 1996). Similarly, studies conducted by Ko, (1995) and Meng, (1986) reveals that religious activities also play an important role for life satisfaction of the elderly people. Religious activities helps in finding new meaning to life and gaining a positive attitude towards death and the loss associated with old age.

Once it was established that most of the respondents stay in old age homes since they had no other option, the logical question that arose what about some of the positives they found in these 'homes'. One factor that emerged during personal interaction was that they have the freedom to do what they want and to live as they wish and are not bound by restrictions especially on their movements. Two, they did not have to be dependent on the whims of family members. Three, they felt they were being properly and adequately looked after and the staff behaved properly with them. Yet another issue was having the company of others belonging to a similar age bracket. This afforded them the opportunity to discuss their problems and share experiences. Thus, it emerged that the peaceful and positive ambiance at old age homes was the reason behind their happiness. This arrangement provides them the much needed comfort, solace stress free environment, peace of mind and absence of conflicts, mostly with their children.

Awareness about Government Policies

The Table below depicts the awareness level of respondents about some of the policies that the government has come up with and

implemented for the welfare of the elderly. It can be seen that the majority of respondents were aware about the pension schemes available for them, irrespective of whether they had earlier worked in the private or public sector. Similarly, it could be seen that 54 per cent of them were aware about various concessions available to them. Also 30 per cent were aware about the aid provided to old age homes. One of the respondents was also aware of Maintenance of Senior Citizen's Act, 2007. According to this Act, it is the obligation of the children or relative, as the case may be, to maintain a senior citizen, if the concerned senior citizen is unable to maintain himself from his earning or his property. This respondent informed that he was aware of the Senior Citizen's Act, since his own brother had successfully used the provisions contained in the Act.

Table 8
Awareness About Government Policies

Awareness About Policies	No of Respondent's	Percentage
Pensions	36	72
Concessions for elderly	27	54
Aid to Old age homes	15	30

Suggestions to Enhance Quality Life of Elderly in Old Age Homes

The respondents gave diverse suggestions on how the quality life of the elderly could be improved. The maximum number of them suggested that regular or frequent visitors would help in enhancing the dignity and quality life of the elderly. Visitors need not only be family members, but could also include people who come to visit because they feel attached to the elderly persons, even though they may not be related to them. A particular mention was made of school and college children who they can talk to alleviate their loneliness. It is pivotal to understand that it is through the support of others, the elderly are able to rebuild and sustain their sense of dignity in their changed circumstances.

Some of them also suggested that people must not look down upon them. Elderly are perceived as the dependent lot of society

because as they age, they require physical, mental and emotional care and support. It is about time people changed their psyche as elderly not only can take, but also provide/give their enriching lessons and experience. A few respondents stated that if people start to put themselves in their position (empathising with them), it would help in increasing their quality of life because ageing and related problems are not in anybody's control. People need to understand that they too will age as some time later in life.

Thus, the suggestions of respondents indicate that care, support and understanding can enhance the quality of life or dignity. They also opined that elderly must put into practise their freedom of speech in every matter to prove that they are not silent sufferers. It shows that they had a pessimistic outlook and did not want to suggest ways that could help in enhancing their quality of life as they felt nothing could be done to improve it.

Finally the study revealed that the most common reasons for the respondents staying in old age homes was that they could not look after themselves or there was no one to take care of them. In fact, this is, in a way, a forced choice. Another reason was the conflict with children or with other family members. The most common purpose reported for preferring institutional living arrangement was to seek peace of mind here since, familial affection was denied to them by their children/close relatives. It is saddening to note that the decision of majority of respondents was not their own, they did not come out of their own free will. Living in old age homes gave a positive and homily feeling to majority of respondents of this study. They were happy because they have made friends and enjoyed being in the company of co-inmates. On the other hand, the efforts of government are not very effective, because a significant number of respondents (28%) revealed that they were not aware of any policy. Pension scheme was the only scheme that was known to the respondents. Respondents informed that they never felt the need to be abreast of government policies.

In conclusion, it can be said that with an increase in materialism in the contemporary society and an inclination towards the western world, there is a change in traditionally preserved and followed values. Now an increasing number of children, instead of considering taking care of their parents as a responsibility, see them as 'disposable'

burdens. We as a society have moved forward and surely emerged as a better place to live in, but we must not forget the values that our forefathers left behind for us. It is, therefore, a sad reflection that these expectations of the elderly for care and comfort from their children remain unfulfilled. The results, therefore, suggest that the state should be prepared to meet the need for good institutional living arrangements for the elderly as the demand for such care is likely to rise in the future. Simultaneously, some sort of counselling services will also need to be developed and incorporated in the larger programmes for the elderly to address their psycho-emotional and physical health.

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Risk Factors of Duration of Suffering from Long Term Diseases among the Elderly People in Rural Bangladesh

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ABSTRACT

This community based cross sectional study was conducted on 250 elderly aged 60 years and above in the three villages of Pabna district, Bangladesh. With the help of a structured questionnaire information regarding the self-rated health, health status, treatment received behaviour and the determinant factors associated with the duration of sufferings from diseases was gathered from these subjects. To analyze the data, both bivariate and multivariate analyses were used as the statistical tools. The findings of the study revealed that most of the elderly persons (70.0%) were suffering from the various sorts of long term (>12 months) diseases. The higher percentage was found among extremely elderly (>70 years), male, life partner less, less family member (<5), illiterate, presently not working, including inadequate income and some or other form of addiction of population (P<0.05). On the basis of present findings it may be

concluded that the ageing and duration of suffering from diseases are interrelated. It is very important to educate people and build more awareness about the geriatric health problems so that the burden of long term diseases will be decreased.

Key words: Elderly population, duration of suffering from diseases, binary logistic regression analysis; Bangladesh

Population ageing is one of the most important and major issue in the present world. It is a process of increasing the number of person aged 60 years and above and often considered the global public health success (Khan, *et al*., 2014; Kowal, *et al*., 2010). The age structure of world population has been experiencing the significant change during the period 1950–2013 (WPAR, 2013) and it is common all over the world, the elderly age range is increasing rapidly and the proportion of children and youth population is decreasing (Islam, and Nath 2012; WPAR, 2013) . In 1950, the number of world aged population was about 200 million, constituting 8.10 per cent of the global population (ASP, 2012). Now, it is 841 million constituting 11.70 per cent of the total population (WPAR, 2013). The number of elderly population is expected to double by 2050 and it will constitute the 21.1 per cent of total population (WPAR, 2013).

Ageing has started earlier in the more developed countries and was beginning to took place in some developing countries like Bangladesh and becoming one of the emerging problem (Nath and Islam 2011). As a small country of 1,47,570 sq km (BBS, 2011) now Bangladesh is the 8th largest and one of the most densely (1015 persion/sq km) populated country in the world (UN, 2013). Though ageing is a universal process but it places an one of the most remarkable vulnerable position in Bangladesh. After liberation period, a significant change took place in this county's population structure and proportion of ageing (=60 years) increased rapidly. During the years 1974–2013, the number of aged population has increased from 1.38 million to 10.005 million and placed 122 ranked aged populated country in the world (WPAR, 2013). This significant change in the proportion of the elderly population has increased their problems like physical and mental health, social and economic (Haque, and Alam 2003). Also increasing the proportion of landless population, changes

in life styles, and rural to urban migration that are leading to smaller families and put them in a more vulnerable situation (Asma, 2002; CPD, 2000). The vulnerability of the elderly population reflected to the higher burden of ill-health and disability (Ahmed, *et al*., 2005; Asma, 2002). But in Bangladesh, elderly health has received a little attention from primary health care services. This issue rarely appears of the public health agenda when some fragmented activities are undertaken in the voluntary and non-governmental sectors (Asma, 2002). Moreover, the governmental primary health care services remain poorly utilized. The elderly people often seeks health care services too late, when "extremely ill" to obtain the adequate treatment. Also the attitudes of the health care providers towards the older people make their situation even more difficult. There are limited provisions of free healthcare services arranged by the government and many others private organizations. But still now, they do not access to these services fully due to the lack of knowledge, physical inability and also insufficient of equipments and expertise. These situation demands a definite health programs for the elderly population. It is an important issue for Bangladesh as resource availability is less and most elderly live in the rural area.

Large bodies of the researches have described the causes and consequences of the ageing of Bangladesh (Kalam and Khan 2006; Nath and Islam, 2012). However, relatively a few studies have focused on the factors affecting on the duration of suffering of diseases of the elderly population in rural Bangladesh. Therefore, this study was conducted to understand the socio-economic and health factors responsible for the long term suffering of diseases of the elderly.

Method

Data was collected from 250 elderly populations aged 60 years and over. Face to face interview was conducted from May 20 to June 15, 2013 in three village of Malonchi union in Pabna district, Bangladesh. Respondents were interviewed using purposive sampling technique through a structure questionnaire. Bengali version of the questionnaire was used for more accurate data collection.

Analysis of Data

Responses were then converted to English for data entry and analysis with Statistical Package for Social Sciences (SPSS) v 16.0 (SPSS Inc., Chicago, IL, USA). Both univariate and multivariate analyses were performed in this study. In univariate analysis, the percentage of the respondents with some selected demographic and socio economic characteristics and types of diseases among the elderly are presented. The bivariate analysis, proportions were compared by using chi square test to analyse the significant associations between socio-economic and demographic variable, and the duration of suffering from diseases. The binary logistic regression technique was used to evaluate the effects of some select variables on the duration of suffering from diseases. The response variable in this analysis is the duration of suffering from diseases, coded 1 for the duration of long term suffering from diseases (>12 months) and 0 for otherwise. To examine the determinants of the duration of suffering from diseases, several independent variables were included. The independent variables are, age ($1=60$–70 years, $2=>70$ years), sex ($1=$male, $2=$ female), current partnership status ($1=$ Yes $0=$ otherwise), types of family ($1=$single family, $2=$joint family), member of family ($1==5, 2=>5$), educational status ($0=$illiterate, $1=$literate), present working status ($0=$no, $1=$yes) family income ($1==6000$Tk, $2=>6000$Tk) and the addiction of any form of drug ($0=$ No, $1=$Yes).

Results

Socio Economic and Demographic Characteristics of the Elderly Population

Distributions of the demographic and socio economic characteristics of the elderly population are presented in Table 1. Among the total elderly populations, 82 (32.80%) are female and 168 (67.20%) are male. Analysis reveals that a vast majority of the elderly population (79.60%) belong to the age group $=70$ (male$=84.10\%$, female$=77.40\%$). Majority of the elderly population are still in formal partnership (81.20%) and only 18.80 per cent are currently partner less (unmarried, divorced, widowed, widower). Majority of the male elderly are found to be current partner (89.28%) and only 10.72 per cent are currently partner less (unmarried, widower). On contrary,

Table 1
Distribution of Demographic, Economic and Educational Characteristics

Characteristics	Sex		Total (%)
	Male (%)	*Female (%)*	
Age (in years)			
60–70	130(77.40)	69(84.10)	199(79.60)
> 70	38(22.60)	13(15.90)	51(20.40)
Religions			
Islam	167(99.40)	79(96.34)	246(98.40)
Others	1(0.60)	3(3.66)	4(1.60)
Partnership status			
Currently having partner	150(89.28)	53(64.64)	203(81.20)
Others	18(10.72)	29(35.36)	57 (18.80)
Types of family			
Nuclear	87(51.78)	45(54.88)	132(52.80)
Joint	81(48.21)	37(45.12)	118(47.20)
Number of family member			
= 5	91(54.20)	41(50.00)	132(52.80)
> 5	77(45.80)	81(50.00)	101(47.20)
Family income (in Taka)	146(86.90)	64(78.00)	210(84.00)
= 6000	22(13.10)	18(22.00)	40(16.0)
> 6000	97(57.70)	53(64.60)	150(60)
Education	71(42.30)	29(35.40)	100(40.0)
Illiterate	91(54.20)	50(61.00)	141(56.40)
Literate	77(45.80)	32(39.00)	109(43.60)
Having cultivated land	106(63.10)	51(62.20)	157(62.80)
=100 Decimal	62(36.90)	31(37.80)	93(37.20)
>100 decimal			
House quality			
Clay made			
Others			
Total	168(67.20)	82 (32.20)	250 (100)

Note: The numbers inside the parenthesis indicate the percentages.

among the total female elderly population, 64.64 per cent are live with her husband and 35.36 per cent are present widowed. About 47 per cent (male = 48.1%, female = 45.12%) of the elderly population lives in joint family and 53 per cent (male = male = 51.78%, female = 54.88%) of the total elderly population lives in nuclear family. The average household size is about 6. About 47.20 per cent (male = 45.80%, female = 50.0%) of the total family comprises with family member more than 5 and 52.80 per cent (male = 54.20%, female = 50.0%) of the total family comprises with family member 5. Mean of the total family income is 12338Tk. Only 16.0 per cent (male = 13.10%, female = 22.0%) of the total respondents live with family income > 6000Tk. and majority (84.0%) of the total respondents live with family income = 6000Tk. (male = 86.90%, female = 78.0%). About three fifth (60.0%) of the total elderly are illiterate (male = 57.70%, female = 64.60%) and only 40 per cent of the total elderly population are literate (male = 42.30%, female = 35.40%). Among the total elderly, 56.40 per cent have the cultivated land is less than 100 Decimal (male = 54.20%, female = 61.0%) and only 43.60 per cent elderly have the cultivated land is more than 100 Decimal (male = 45.80%, female = 39.0%). Majority of the elderly population (62.80%) live in clay made house (male = 63.10%, female = 62.20%) and 37.20 per cent elderly population live in others types of house (male = 36.90%, female = 37.80%).

Health Status of Elderly Population

The percentage distribution of usual health hazards of the elderly population is presented in Table 2. In this study we found majority of the elderly male (87%) and female (79%) suffer from the some sort of health problems. Among of them 175 (70%) elderly sufferer the some sort of diseases for more than 12 month (long term diseases) and only 75 (30%) elderly suffer the various form of diseases for less 1 year (short term diseases).

Insomnia is the most common problem for both male and female and elderly females (48.78%) are more sufferer of the insomnia than elderly males (33.92%). The second common problem of the reported respondent is eye problem. Analysis also reveals that, 37.60 per cent of the total respondent (male = 36.90%, female = 39.03%) suffers the various sort of eye problem. The third and fourth common diseases of the respondent are the arthritis (total = 28%, male = 31.55%,

female = 20.73%) and pain in joint (total = 21.20%, male = 16.67%, female = 13.41). Also diabetes (total = 16.80%, male = 14.28%, female = 21.95%), high blood pressure (total = 5.20%, male = 4.76%, female = 6.09%), heart diseases (total = 8.40%, male = 7.74%, female = 9.76%), waist/back pain (total = 6.40%, male = 4.76%, female = 9.75%), asthma (total = 4.80%, male = 4.76%, female = 4.87%), ulcer (total = 6.40%, male = 4.16%, female = 10.97%) are the some others common problems of the elderly population. Most of the cases female elderly are the more sufferer than male elderly.

Table 2
Percentage Distribution of Usual Health Hazards of the Elderly Citizen

Ailment	Suffers by Sexes		Number of Sufferer in the Total Sample (%)
	Male (%)	*Female (%)*	
Arthritis	53(31.55)	17(20.73)	70(28.00)
Insomnia	57(33.92)	40(48.78)	98(39.20)
Pain in Joint	42(16.67)	11(13.41)	53(21.20)
Diabetes	24(14.28)	18(21.95)	42(16.80)
Eye Problem	62(36.90)	32(39.03)	94(37.60)
Heart diseases	13(7.74)	8(9.76)	21(8.40)
High Blood Pressure	8(4.76)	5(6.09)	13(5.20)
Asthma	8(4.76)	4(4.87)	12(4.80)
Waist/Back Pain	8(4.76)	8(9.75)	16(6.40)
Ulcer	7(4.16)	9(10.97)	16(6.40)

* Only those diseases were shown in the table prevalence of which was exceeds 5 per cent in the total sample. The numbers inside the parenthesis indicate the percentages.

The percentage distributions of the basic needs of the elderly population are presented in Table 3. Analysis shows that about 43.60 per cent (male = 47.0%, female = 36.60%) of the total elderly population are bear their treatment cost by own. On average half (47.20%) of the total elderly population (male = 42.90%, female = 56.10%) had been depend for their treatment cost on son where only 4.00 per cent elderly depend on daughter (4.80% male and 2.40% female). Small percentage of the total elderly (total = 5.20%, male = 5.30%, female = 4.90%) depend on grandchild (2.40%) and others (2.80%). Among the total elderly population, 23.60 per cent (male = 22.60%, female = 25.60%) elderly population seen to be self accompanied while

going to treatment. Again 53.60 per cent male elderly used to accompany by son (39.30%), daughter (14.30%). On the contrary, 63.40 per cent female elderly used to accompany by their sons (51.20%) and daughter (12.20%). A significant number of the elderly (total=19.60%, male=23.80%, female=11.0%) depends on grandchild and others (relatives, home worker, etc.).

Table 3
Distribution of Basic Needs of the Elderly Population

Characteristics	Male (%)	Female (%)	Total (%)
Bearing treatment cost			
Own	79(47.0)	30(36.60)	109(43.60)
Son	72(42.90)	46(56.10)	118(47.20)
Daughter	8(4.80)	2(2.40)	10(4.0)
Others	9(5.30)	4(4.90)	13(5.20)
Received accompany when sick			
Own	38(22.60)	21(25.60)	59(23.60)
Son	66(39.30)	42(51.20)	108(43.20)
Daughters	24(14.30)	10(12.20)	34(13.60)
Others	40(23.80)	9(11.0)	49(19.60)
Needs of elderly population			
Proper treatments	35(20.80)	16(19.50)	51(20.4)
Food	14(8.30)	20(24.40)	34(13.60)
Social security	39(23.20)	15(18.30)	54(21.60)
Safe housing	26(15.50)	20(24.40)	46(18.40)
Family care	54(32.10)	11(13.40)	65(26.0)
Sources of treatment	16(9.53)	15(18.30)	31(12.40)
Self treatment	43(25.82)	9(10.97)	52(20.80)
Drugstore salespeople	2(1.20)	13(15.85)	15(6.0)
Traditional treatment	70(41.70)	31(37.81)	101(40.40)
Paraprofessional	37(22.03)	14(17.07)	51(20.40)
Qualified allopathic practitioner			
Total	168(67.20)	82(32.80)	250(100)

Note: The numbers inside the parenthesis indicate the percentages.

Majority of the elderly received treatment form un-qualified medical professionals when they were sick. Analysis reveals that, 52 (20.80%) received treatment of the drugstore salespeople and the male

Table 4

Association between 'Duration of Suffering from Diseases' with some Selected Demographic and Socio-economic Factors

Variable	Duration of Suffering from Diseases			P Value
	= 12(%)	*> 12(%)*	*Total (%)*	
Age (in years)				
60–70	63(31.70)	136(68.30)	199(100)	0.048
>70	12(23.53)	39(76.47)	51(100)	
Sex				
Male	48(28.60)	120(71.40)	168(100)	0.498
Female	27(32.90)	55(67.10)	82(100)	
Partnership status				
Currently having partner	64(31.50)	139(68.50)	203(100)	0.027
Others	11(23.40)	36(76.60)	47(100)	
Family type				
Nuclear	39(29.50)	93(70.50)	132(100)	0.04
Joint/Extended	36(30.50)	82(69.50)	118(100)	
Number of family member				
= 5	39(25.50)	114(74.50)	153(100)	0.05
>5	36(37.10)	61(62.90)	97(100)	
Education				
Illiterate	48(31.80)	103(68.20)	151(100)	0.048
Literate	27(27.30)	72(72.70)	99(100)	
Working status				
Yes	47(34.60)	89(65.40)	136(100)	0.046
No	28(24.60)	86(75.40)	114(100)	
Family income (in Taka)				
=6000	39(36.10)	69(63.90)	108(100)	0.036
>6000	36(25.40)	106(74.60)	142(100)	
Behaviour of family member				
Good	64(31.10)	142(68.90)	206(100)	0.425
Not so good	11(25.00)	33(75.00)	44(100)	
Drug addiction				
Yes	24(22.20)	84(77.80)	108(100)	0.019
No	51(35.90)	91(64.10)	142(100)	
Cultivated land				
=100 Decimal	44(31.20)	97(68.80)	141(100)	0.19
>100 Decimal	31(28.40)	78(71.60)	109(100)	
Total	75(30)	175(70)	250(100)	

Note: The numbers inside the parenthesis indicate the percentages

aged person (25.82%) are more interested to received this type of treatments as compared to the female aged person (10.97%). About 31(12.4%) of the total respondents (male=9.53%, female=18.30%) are depend on self care/self treatment when they were sick. Large number of the total respondent (40.40%) are received treatment (male=41.70%, female=37.81%) from village doctor and only one fifth of the total respondent (20.40%) received treatment from hospital or clinic or qualified MBBS doctors when they were sick (male=22.03%, female=17.07%). Also about 6.0% (male=1.20%, female=15.85%) of the total elderly population are received treatment from traditional sources (kabiraj).

About one fourth (26.0%) of the total aged respondents wants only the family care (male=32.10%, female=13.40%) in his/her life. The second largest (20.40%) demand of the aged person from his/her family is the proper treatment (male=20.80%, female=19.50%) in the critical point of his/her life. Food is another basic need of the aged person. About 13.60% (male=8.30%, female=24.40%) of the total aged person reports the needs of food in his/her life. The some others basic needs of the aged persons are social security (total=21.60%, male=23.20%, female=18.30) and safe housing (total=18.40%, male=15.50%, female=24.40%).

The contingency analysis between the duration of suffering from diseases and others characteristics are presented in Table 4. The results reveals that about 70 per cent of the total respondent are suffering from long term diseases (=12 month) and age, current partnership status, family types, household size, educational status, present working status, family income and drug addiction are significantly associated with the duration of long term diseases.

Multivariate Analysis

Impact of the associated factors on 'duration of suffering from long term diseases' were identified by the binary logistic regression analysis presented in Table 5. The results reveals that duration of suffering from long term diseases is 5.70 per cent (OR=0.943, 95% CI=0.427–2.085) less among elderly age at most 70 years as compared to the respondent whose age is more than 70 years. Also the prevalence of duration of suffering from long term diseases is 1.786 (OR=1.786,

95% CI = 0.756–4.217) times more among currently partner less elderly as compared to the elderly with having partner. Types of the family and house hold size can also have a significant effect on duration of suffering from long term diseases. Analysis reveals that, duration of suffering from long term diseases is 12.80 per cent (OR = 0.872, 95% CI = 0.459–1.656) and 42.3 per cent (OR = 0.577, 95% CI = 0.309–1.076) less among the elderly with joint family and family member more than 5 respectively. Present working status also play important role on the duration of suffering from long term diseases and analysis reveals that duration of suffering from long term diseases is 1.750 (OR = 1.750, 95% CI = 0.909–3.370) times high among the elderly whose are totally separated from any kind of works. Duration of suffering from long term diseases is also 39.30 per cent (OR = 0.607, 95% CI = 0.313–1.178) less among the elderly population with family less than 6000Tk. Addiction also plays the significant role on the duration of suffering from long term diseases and elderly whose are use the different form of drug is 1.297 (OR = 0.542–1.678) times higher risk of long term diseases as compared to the elderly whose are not use any form of drug.

Table 5
Logistic Regression Analysis for Analysing the 'Duration of Suffering from Long Term Diseases' by Some Selected Characteristics

Independent Variables	Duration of Suffering from Long Term Diseases				
	Coefficient β	SE of β	Odds Ratio (OR)	95% CI of OR	
				Lower	Upper
Age (in years)					
60–70	−0.059	0.405	0.943**	0.427	2.085
> 70 ®	—		1		
Sex					
Male®	—		1		
Female	−0.285	0.354	0.752	0.376	1.506
Partnership status					
Currently having partner®	—		1		
Otherwise	0.580	0.438	1.786**	0.756	4.217
Types of family					

Con'd...

Con'd...

Single family ®	—		1		
Joint/extended Family	–0.137	0.327	0.872**	0.459	1.656
Number of family member					
= 5®	—		1		
> 5	–0.551	0.318	0.577**	0.309	1.076
Education					
Illiterate	0.518	0.345	1.679	0.854	3.301
Literate ®	—		1		
Working status					
Yes®	—		1		
No	0.560	0.334	1.750**	0.909	3.370
Family income (in Tk.)					
= 6000 BDT	–0.499	0.338	0.607**	0.313	1.178
>6000 BDT®	—		1		
Drug addiction					
Yes	–0.580	0.323	1.297**	0.542	1.678
No ®	—		1		

Note: **Significant at $P < 0.05$, ***Significant at $P < 0.01$, and ®) represent the reference category.

Discussion

Ageing is the serious reality of human life and one of the natural and unavoidable demographic processes. All the developed countries in the world are realize this reality and evolved policy instrument in the form of the social security as well as care for the elderly through institutions like old age homes, geriatric hospitals, old age recreation center and many other public and private care systems for the aged populations. But still now these policy instruments are at a primary stage in developing countries like Bangladesh. Though most of the developing countries are young in terms of the population age structure but they are becoming older more rapidly than the industrialized nations. This change in the population distribution will have the serious implication and require a special attention for this group.

In view of gradual increment of the number of elderly population in Bangladesh, they are becoming more vulnerable in the society. But very little or no support is available through the public and

governmental programs for the welfare of the elderly. A community based study was carried out of 250 persons over age 60. The study result reveals that, majority of the elderly are in the age range 60–70 years. A study conducted by the Uddin at al. (2010) found that majority of the older people are in Bangladesh belong to the age group 60–69 years which is similar with the findings of this study. The result of the study also reveals that, vast majority of the elderly (75%) are suffering from different sort of long term diseases (=12 month) and multi-morbidity have common among them. Islam and Khan and Kalam (2006) and Khanam *et al*., (2011) were also found the same result. Among the 250 elderly people in the study sites 39.20 per cent, 37.70 per cent were suffering from insomnia and eye problem respectively. This finding slightly supported the findings of Kalam and Khan (2006) but directly opposite of the findings of Khanam *et al*. (2011) that arthritis is the most common health problem among the elderly in Bangladesh. Traditionally older adults in Bangladesh depend on family and family members provide companionship, food, shelter and the care to the older adults. But rapid socio economic and demographic transformation, mass poverty, declining social and religious values, influence of western culture and other factors have broken down the traditional system. These socio economic transformations will certainly put the welfare of the elderly in jeopardy. This study shows that, about 43.60 per cent and 47.20 per cent of the total elderly were personally bear their treatment cost by themselves and by the help of the son respectively. This finding shows the increasing and decreasing trend, i.e., the percentage of self treatment cost bearing elderly increasing and son treatment cost bearing elderly decreasing to the findings of Kalam and Khan (2006). In the same way, received accompany when sick, needs of the elderly population shows the different pattern in the previous others findings (Ibid.); Munsur *et al*., (2010)). Generally older people prefer to live in family atmosphere and kinship bond. But they are suffer physically and psychologically when these traditional family atmosphere and kinship bond are broking and this will support the energy of affecting the various sorts of long term diseases. In this study we observed that, long term diseases were observed more in the elderly in a single or nuclear family with at least

family member 5. The high prevalence of long term diseases among the elderly population found in this study is consistent with the findings of others studies (Khan, and kalam, 2006; Munsur, *et al.,* 2010; Uddin, *et al.,* 2011).

Gender wise differences were found in the health status as well as duration of suffering from the long term diseases of the elderly population. In this study we found male are the more sufferer in the long-term diseases as compared to the female. This result is directly contradictory to the many others previous studies (Kalam, and Khan, 2006; Khanam, *et al.,* 2011). Though women in rural areas live in more marginal conditions than men, but at the present time different NGO's (BRAC, Grameen Bank) provide the free health facilities and create the awareness about generic health problems. But these activities are only limited to the women so that women elderly are more aware about their health problems than male and treat at the root level. So that duration of the suffering from long term diseases are less observed in the female elderly through prevalence of diseases is high among female elderly. This criteria helps to represents the totally different results in this studies from the previous others studies. This study results strictly suggested that if we are able to aware both male and female elderly at the root level about their health problems, it will be possible to reduce higher burden of long term diseases.

In this study, it is evident that duration of suffering from long term diseases increasing with the increasing of age. Long term diseases are also observed more in the presently work less elderly. Hossain *et al*., (2006); Kalam and Khan (2006) and Munsur *et al*. (2010) have also found in their study that physical diseases and the duration of suffering are increasing day by day and presently workless elderly are in the more sufferers. Their findings are similar to the present study.

Duration of suffering from long term diseases are also observed more among the currently partner less elderly. Elderly with having a partner are able to share their sorrows and happiness and enjoy the better healthy life as compared to the partner less elderly. In fact, our findings are in accordance with the findings of Kalam and Khan (2006) and Munsur *et al*., (2010).

Conclusions

The main aim of this study was to look at the risk factors of the duration of suffering from long term diseases and the treatment seeking behavior of the elderly. The study shows that ageing and the suffering from long term diseases are interrelated. About 70 per cent total elderly have suffered from some sort of long term diseases. Among them, majority had multiple illnesses. Marital status, educational level, member of the family, family income is significantly associated with the risk of suffering from long term diseases. A significant proportion of the elderly population bear their treatment cost by own and this percentage is seen higher among male than that of female. Though elderly population has not the enough physical capacity to perform hard working, but they are involved different kind of work to meet their basic needs. So, it is important to educate general people about the long term diseases of the elderly and its associated factors. It will be helpful to create more awareness in the society and community about the vulnerable conditions of elderly and ways to remove it.

Conflict of Interest: None to declare.

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Prevalence of Falls and Fall Risk Assessment in an Urban Elderly Population of Ludhiana

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ABSTRACT

Falls are one of the major problems in the elderly. With the increasing elderly population in India, falls in the elderly are expected to be an increasingly significant and preventable public health problem. The present cross-sectional study was conducted amongst the elderly (> 60 years old) residents of an urban field practice area of the Department of Community Medicine, Christian Medical College, Ludhiana, to assess the various risk factors associated with falls in the study population. A systematic random sample of 170 consenting elderly was studied and the respondents were visited in their homes. Socio-demographic infor- mation was obtained on a pre-tested questionnaire incorporated with the standard and validated "Falls Risk for Older People – Community setting" (FROP-COM) questionnaire. Falls Risk was assessed using FROP-COM Falls Risk Assessment Guidelines. The prevalence of falls in the studied elderly was found to be 28.2 per cent with an average of 0.2 falls per person per year. Increasing age (P = 0.002) and lower socio-economic status (P = 0.039) were observed to have a significantly higher risk of falls in the elderly. No statistically significant association was found for both the prevalence of falls as well as the falls risk score, and sex, age, educa- tional status, marital status, employment status and type of family. Several promising strategies such as exercise programmes,

environmental modifications and other educational opportunities for preventing falls and fractures can considerably decrease the risk of falls and limit impairment.

Key words: Falls, Elderly, Community-based, FROP-COM.

Falls are one of the major problems in the elderly and are considered one of the "Geriatric giants" (immobility, instability, incontinence and impaired intellect/memory) (Kumar, *et al.*,2013). Koski, *et al.*, (1998) defines "fall" as a sudden, unintended loss of balance leaving the individual in contact with the floor or another surface such as a step or chair. WHO (2008) reports that about 4,24,000 fall-related deaths occurred globally in 2004 and about one fifth of them (95,000 deaths) took place in India. Falls are the second leading cause of unintentional injury mortality and they account for 11 per cent of all unintentional injury deaths worldwide. About a third of community-dwelling people >65 years fall each year, and the incidence increases with age (Gillespie, *et al.*, 2012). Forty five percent elderly in a south (Gutta, *et al.*, 2013) and 51.5 per cent in a north (Joshi, *et al.*, 2003) Indian population have been reported to have a history of fall.

Risk factors strongly associated with falling in the elderly include muscle weakness, a history of falls, impairments in gait or balance, visual impairment, arthritis, depression, age >80 years, functional limitation, and use of psychotropic medications. (Rubenstein and Powers 2002). According to the National Center for Injury Prevention and Control (2008), the major underlying causes for fall-related hospital admissions are hip fractures, traumatic brain injuries and upper limb injuries. Healthcare impacts and costs of falls in older age are increasing all over the world.

Increasing awareness about fall risk factors and ways to reduce fall risk is crucial in helping older adults and their families to effectively prevent falls, emphasizing the importance of health education as an important component in fall prevention programs (WHO, 2007). People should also be made to understand that falls are preventable and need not be a part of normal ageing (Gutta, *et al.*, 2013).

Objectives

To assess the various risk factors associated with falls in an elderly population in Ludhiana.

Method

This Cross-sectional, descriptive study was planned by the Department of Community Medicine, Christian Medical College, Ludhiana and was conducted in the period from June 2014 to August 2014

Study Population: 361 elderly (>60 years of age) residents of Jamalpur, (field practice area of the Department of Community Medicine), which has a total population of 8300 (status as on 31.12.2013: *Source:* Annual Report 2013, Department of Community Medicine, Christian Medical College, and Ludhiana.). This population is covered for healthcare in a beat visit manner by two MPHWs (F) (female multipurpose health workers), along with medical interns and nursing students.

Sample: Taking 51.5 per cent as the prevalence of falls in the elderly in a North Indian population (Joshi, 2003), and using the formula $n = [DEFF*Np(1-p)]/[(d^2/Z^2_{1-a/2}*(N-1)+p*(1-p)]$ (Dean, 2011), the minimum sample size required at 95 per cent confidence interval and 5 per cent absolute precision, with finite population correction for a population of 361, was 167. The sample for study was obtained by systematic random sampling technique. Family folders were screened and a line-list of all the elderly was made. By dividing the total number of elderly by the minimum sample size required, the sampling interval obtained in this study was $361/167=2.16$ (say 2). A random number was chosen (using the last three digits in a 100 rupee note). The first respondent to participate in the study was selected from the line-list by this random number. The sampling interval was then used as the constant difference between subjects. Thus every alternate elderly was included in the study. Out of 180 respondents, 10 met the exclusion criteria. Hence, 170 respondents were studied.

Exclusion Criteria*:* Bed-ridden elderly patients, those who had suffered a paralysis, those who did not consent to participate in the study and those who could not be contacted on two consecutive visits were excluded.

Data Collection*:* The respondents were visited in their homes by the student investigator, assisted by the MPHWs to assist in communicating with the respondents in the local language (Hindi/Punjabi). After obtaining signed informed consent from the respondent, socio-demographic information was obtained on a pretested questionnaire incorporated with the standardized and validated "Falls Risk for Older People-Community setting" (FROP-COM) questionnaire. The FROP-COM Falls Risk Assessment Guidelines has been developed by the National Ageing Research Institute (2010). The falls risk is graded according to the score as mild (score 0-11), moderate (score 12–18) and high (score 19–60), on a scale with a maximum score 60.

The respondents were assessed and graded for fall risk and, based on the assessment, were advised on prevention and management of falls at the household level. They were referred to the Health Centre for medical management and advice if required. The Socio-economic status was calculated and graded using modified BG Prasad's Scale (Bhalwar, *et al.,* 2009).

Statistical Analysis: The data was analyzed using Epi-Info version-6 software. Statistical analysis was done using simple proportions and percentages. Odds Ratio with 95 per cent confidence limits was calculated, and the Chi square test was applied where appropriate.

Results

Table 1
Frequency of Falls in the Elderly

No of falls after 60 years	Frequency	Number of falls in the past 12 months	Frequency
0	122 (71.8)	0	144 (84.7)
1	27 (15.9)	1	19 (11.2)
2	10 (5.9)	2	5 (2.9)
3 and more	11 (6.5)	3	2 (1.2)

Table-1: Out of 170 elderly respondents, 48 (28.2%) had history of fall after age 60, 21 (12.3%) fell more than once. Hence the prevalence of falls among elderly was found to be 28.2 per cent . Out of the 170 elderly 26 (15.3%) had history of at least one fall, 19 (11.2%) fell once, 5

(2.9%) fell twice and 2 (1.2%) fell three or more times in the past twelve months, averaging 0.2 falls per person per year.

Table 2

Association of Falls with Socio-demographic Characteristics in the Elderly

Variables	Fell	Did not fall	Total	OR (95% CI)	P-value
Sex					
Female	31 (30.7)	70 (69.3)	101 (59.4)	1.35 (0.64-2.87)	0.390
Male	17 (24.6)	52 (75.4)	69 (40.6)	1 (Reference)	
Age Group					
61-70 years	22 (19.5)	91 (80.5)	113 (66.5)	1 (Reference)	0.002
71-80 years	21 (46.7)	24 (53.3)	45 (26.5)	3.62 (1.61-8.20)	
>80 years	5 (41.7)	7 (58.3)	12 (7.0)	2.95 (0.73-11.78)	
Education					
Illiterate	20 (27.8)	52 (72.2)	72 (42.4)	1 (Reference)	0.994
Literate	28 (28.6)	70 (71.4)	98 (32.9)		
Marital Status					
Married	33 (26.6)	91 (73.4)	124 (72.9)	1 (Reference)	0.440
Single/Widowed	15 (32.6)	31 (67.4)	46 (27.1)	1.33 (0.60-2.95)	
Occupation					
Employed	3 (15.0)	17 (85.0)	20 (11.8)	1 (Reference)	0.162
Not gainfully employed	45 (30.0)	105 (70.0)	150 (88.2)	2.43 (0.63-11.00)	
Type of Family					
Joint	23 (25.8)	66 (74.2)	89 (52.4)	1 (Reference)	0.468
Nuclear	25 (30.9)	56 (69.1)	81 (47.6)	1.28 (0.62-2.64)	
Socio-Economic Status					
I-Upper	2 (9.1)	20 (90.9)	22 (12.9)	1 (Reference)	0.039
II-Upper Middle	22 (25.3)	65 (74.7)	87 (51.2)	3.38 (0.68-22.80)	
III-Lower Middle	17 (41.5)	24 (58.5)	41 (24.1)	7.08 (1.31-50.48)	
IV-Upper Lower	7 (35.0)	13 (65.0)	20 (11.8)	5.38 (0.81-44.94)	
Total	48	122	170		

Table-2: Increasing age (P = 0.002) and lower socio-economic status (P = 0.039) were observed to have a significantly higher risk of falls in the elderly

Table 3
Falls Risk and Number of Falls After 60 Years in the Elderly

No. of Falls	Mild Falls Risk	Moderate/Severe Falls Risk	Total
0	116 (74.4)	6 (42.9.0)	122 (71.8)
1	22 (14.1)	3 (35.7)	27 (15.9)
2 or more	18 (11.5)	3 (21.4)	21 (12.3)
Total	156 (100.0) (91.8)	14 (100.0) (8.2)	170

$\chi^2 = 3.42$, df = 2, p = 0.181

Table-3: Out of all the individuals who had mild fall risk (risk score 0-11) 74.4 per cent did not fall after 60 years of age, 14.1 per cent fell once after 60 years of age, 6.4 per cent fell twice and 5.1 per cent fell 3 times or more after 60 years of age. Out of the individuals who had moderate fall risk (risk score 12-18) 60 per cent did not fall beyond 60 years of age, 30 per cent fell once and 10 per cent fell 3 times or more beyond 60 years of age. Among those who were at Severe fall risk (risk score 19-60) 50 per cent had one fall after 60 years of age and 50 per cent fell down 3 times or more. These findings are statistically significant.

Discussion

Out of the 170 community dwelling elderly studied, 48 had a fall, and hence the prevalence of falls in the elderly in the present study was found to be 28.2 per cent , averaging 0.2 falls per person per year. Prospective studies have reported that 30 per cent to 60 per cent of community dwelling elderly fall each year, with approximately half of them experiencing recurrent falls. Rubenstein, *et al.,* (2002) and Kerse *et al.,* (2008) reported the prevalence of falls as 24.1 per cent among community dwelling elderly in Australia. A WHO report (2004) showed 28-35 per cent of people aged 65 years and above fall each year. Krishnaswamy and Usha (2005), while observing the distribution of history of falls among elderly people over 60 years found that 51.5 per cent of the subjects had fallen. Banker et al., (2011) found the frequency of falls among elders aged 60 years and above as 7.7 per cent. This low prevalence of falls among these elderly may be attributed to the fact that reduced risk of falls was due to better housing conditions, as the study was done on the inmates of old age homes.

21 (12.4%) of the elderly in the present study gave history of recurrent falls after the age of 60 years with 2.4 per cent of them having more than 4 falls. Chu, *et al.,* (2005) found 24.5 per cent of the ambulatory Chinese elderly had recurrent falls with 1.3 per cent of the fallers having 4 or more falls. However, prospective studies done in the developed countries have shown that approximately half of those who fall, experience recurrent falls (Joshi, *et al.,* 2003). In a study conducted in Vellore, 45 per cent elderly were found to have fallen more than once and one third having fallen 4 or more times with 77 per cent of falls occurring between 60 and 70 years of age. (Gutta, *et al.,* 2013)

More females (30.7%) than males (24.6%) amongst the study respondents had a fall. Dandona, et al., (2010) reported the annual incidence of non-fatal fall related injury based on a 3 month recall as 3.30 per cent for men and 9.22 per cent for women with the incidence increasing with age. Large scale robust epidemiological studies of falls related injuries have demonstrated that women have more falls injuries than men, with more attendant suffering, morbidity and mortality (Stevens, and Sogolow 2005). Another study on Saudi community dwelling older people also reported the proportion of those who fell in the previous 12 months to be 37.5 per cent for males and 62.5 per cent for females (El-Sobsky, 2011).

The present study showed a statistically significant (P = 0.002) relationship between age-group and incidence of falls. The significance of falls among elderly people, is that, the number of falls increases with age but the injury rate is highest among the oldest old subjects (> 80 years) subjects with the history of falling more than twice (WHO, 2007). Johnson, et al., (2006) in his study found 45 per cent of community dwelling participants suffered a fall in the previous year. Overall of those who fell, 74 per cent reported an injury. The incidence of falls (History of a single fall in the last 6 months) was found to be 14 per cent in 10 states across India (Johnson, et al., 2006).

No significant relationship was observed between educational status of the elderly respondents and falls. A study conducted among elderly in Cambridge city showed higher incidence of falls among people with higher education level, significantly high among non-manual social class (Fleming, et al., 2008). Hanlon et al., (2002)

also suggested that greater level of education is associated with higher falls risk.

The single (unmarried or widowed) as well as those staying in a nuclear family were found to have more chances of experiencing a fall, though the associations was not found to be statistically significant. Cultural practices such as family caregiving, and family values around and support for independent living of elders, for example, might impact on fall frequency, as might government legislation and policies (for example in relation to accessibility of public facilities).

In the present study, a statistically significant relationship has been found between socio-economic class and falls in the elderly, with those belonging to the lower class having more falls. West, et al., (2004) also observed a 10 per cent higher admission for falls amongst the most deprived which can be explained in terms of the possibility that a minor fall has bigger impact on an individual with multiple co-morbidities and/or poor living environment than it would on someone who has good health, social and financial resources.

The number of falls increased with increasing falls risk score, but the falls risk score was not found to be influenced by sex, age, educational status, marital status, employment status, type of family and socio-economic status in the present study. Falls are not an inevitable consequence of aging, but falls do occur more often among older adults because fall risk factors increase with age and are usually associated with health and aging conditions. Usually two or more risk factors interact to cause a fall (such as poor balance and low vision, which can cause a trip and fall going up a single step). Falls can negatively affect the lives of older adults, even when they do not result in significant injuries (Schuffham, *et al.*, 2003). Home or environmental risk factors play a role in about half of all falls. Understanding these risk factors is a very important step which helps in reducing older adult falls.

The FROP-COM Falls Risk Assessment Guidelines developed by the National Ageing Research Institute (2010) recommend the following actions for the elderly according to their falls risk: mild falls risk: implement actions for identified individual risk factors and recommend health promotion behavior to minimize future ongoing risk (e.g., increased physical activity, good nutrition); moderate falls

risk: implement actions for identified individual falls risk factors; high falls risk: implement actions for identified individual risk factors and implement additional actions for high falls risk (e.g., refer to a specialist Falls Clinic).

Conclusions

The prevalence of falls in the elderly in the present study was found to be 28.2 per cent, with the older elderly having higher prevalence of falls as well as recurrent falls. The prevalence of falls in the elderly was significantly higher in those belonging to the lower socio-economic classes as compared to those of the upper class. The prevalence of falls was not observed to be influenced by sex, educational status, marital status, employment status and type of family. The number of falls increased with increasing falls risk score, but the falls risk score was not found to be influenced by sex, age, educational status, marital status, employment status, type of family and socio-economic status.

Recommendations

Several promising strategies such as exercise programmes, environmental modifications and other educational opportunities for preventing falls and fractures can considerably decrease the risk of further falls and limit impairment. People should also be made to understand that falls are preventable and need not be a part of normal ageing. Health professionals should be more careful to identify the causes of falls, inform the family about the cause and then prescribe effective interventions. Follow up of these individuals should be done to monitor compliance. Community-based fall registries and surveillance systems can be set up.

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Lifestyle Diseases a Matter of Concern for Elderly Women in India

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ABSTRACT

The purpose of the present study was to understand the extent of life style disease (LSDs) and its factors among Indian elderly women (60 years and above), who went for screening of the disease. Using data from India Human Development Survey (2004–05), the authors have analysed three major LSDs namely High BP, Heart disease and Diabetes. The study has employed bi-variate analysis including chi-square test to determine socio-economic differentials in the prevalence of LSDs and multivariate analysis to find out its determinants among elderly women. The results show that blood pressure is the most commonly reported lifestyle disease by elderly women (38%) followed by diabetes (18%) and less than ten per cent of them report heart problems. Furthermore, the multi-nominal results show that LSDs are prevalent in urban area, high caste groups, educated and non-poor section of the society. The present study documented several socio-economic factors that determine the prevalence of LSDs among elderly women in India. A comprehensive healthcare policy should be adopted to form effective programmes concentrated on lifestyle based non-communicable diseases for elderly population in general and elderly women in particular.

Key words: Disease, Elderly, Women, Life Style Diseases (LSD), India, IHDS.

India is experiencing a rapid health transition with the increasing burden of chronic and life style diseases. In the year 2005, the NCDs were responsible for 53per cent of deaths and 44 per cent of disability adjusted life years lost (Srinath RK, *et al.,* 2005). As per the estimates of WHO, the proportion of NCDs would increase to 57 per cent by 2020 from 36 per cent in 1990 (WHO, 2003). These figures point to the enormous burden of NCDs that India is most likely to face in the near future (Nugent R, 2008). While these diseases present a challenge for health policy for people at all stages of life course, they are particularly more evident among the older population. Among these diseases, abnormal blood pressure (BP), cardiovascular disease and diabetes are some of the most frequently reported long-term illness that causes morbidity and mortality among elderly population (Desai S, *et al.,* 2010). Sharma (2003) argued in his study that elderly have limited regenerative abilities making them susceptible to various morbidities. The average number of diseases reported by older population is 2.6 per person, which suggest that, multiple morbidities are very common in this age group. The very first reason is the ignorance, among elderly, about several newly discovered morbid conditions; secondly, decline in the biological capacity with an increase in age can make lifestyle disease fatal in worst cases. The increase in the vulnerability due to biological factors cannot be controlled; however increasing suscepti-bility due to lifestyle changes can be controlled if not eradicated completely. The growing proportion of the elderly population and declining resistance capacity with age give enough reasons to under-stand the importance of addressing these health problems for elderly population in particular (WHO, 2003).

The issue of ageing has recently come up as a challenge for India because the traditional system of multigenerational co-residence that has provided much needed support and care to the elderly is gradually giving way to nuclear family set ups where elderly are left alone (Irudaya Rajan S, *et al.,* 2000; Alam M and Mukherjee M, 2005; Golandaj JA, *et al.,* 2013). A shift in the expenditure pattern with a greater tilt towards medical goods in old age is quite obvious. Around 33 per cent of elderly are living below the poverty line and 90 per cent of the workforce is engaged in unorganized sector that has no social security mechanism (NSSO, 1998). The socio-economic status of

elderly is way behind many economically advanced nations (Bloom ED, *et al.,* 2010). In such circumstances, it becomes imperative for the government to make provision for affordable health care services.

The area of graying population is being explored at length; however there is a virtual vacuum of studies that have attempted to explore the effect of lifestyle diseases on the elderly population. Such diseases are termed as the disease of longevity that itself points to the direction of rejecting the assumption of elderly being immune from such diseases. The present study is focused on elderly women as given the patriarchal nature of Indian society, women are considered as the weaker sex. Prakash has rightly mentioned way back in 1999 that Indian elderly women suffer from triple jeopardy, i.e., of being old, being woman in the patriarchal structure and being poor (Prakash IJ, 1999). Therefore, the present study aims at understanding the extent of life style disease (LSDs) among elderly women and its relationship with the advancement of age in India.

Materials and Methods

Data Source and Sample Size

The present study has used the data of India Human Development Survey (IHDS) (NCAER, 2004), a collaborative research project of the University of Maryland, USA and National Council of Applied Economic Research, New Delhi. IHDS covering 99.9 per cent of India's population has collected a vast range of information on various issues such as health, morbidity, education, employment, economic status, social capital, etc. The present study was, however, focused on 8,941 elderly women in the age group of 60 years and above. The following table gives the sample selection for the present study (for more details of the survey design, sampling and implementation IHDS 2004–05 reports can be consulted (Desai S, *et al.,* 2010)).

Table A

Population	Number
Total Households	41,554
Total sample size	2,15,754
Elderly population	17,904
Elderly women	8,941

Construction of Variables

According to the availability of data, the study has assessed following non-communicable diseases; High Blood Pressure (BP), Heart disease and Diabetes. A variable has been computed combining all the diseases considered for analysis in three categories; "No LSD", "One LSD" and "1+LSD". Table B

gives the definition of health and predictor variables considered for the study.

Table B

Health Variable	Predictor Variables
Life style disease:	Age[1]: Older old population (60–69 years) and oldest old population (70 years and above).
a. High Blood Pressure (BP)	Place of residence: Rural and Urban.
b. Heart disease and	Caste: Scheduled Castes (SCs)/Scheduled Tribes (STs), Other Backward Castes (OBCs) and other castes
c. Diabetes	Religion: Hindu, Muslim, and others
	Educational level: No schooling, 1–4 years, 5–9 years and 10 and above years of schooling.
	Wealth status[2]: Poor and non poor
	Marital status: currently married, widowed and others
	Family type: Nuclear family and joint family.

Analytical Approach

In order to identify the factors associated with the selected lifestyle diseases among older women, bi-variate and multivariate analyses have been carried out. In order to examine the socioeconomic and demographic differentials in the prevalence of LSDs among elderly women, we have used bi-variate analyses and the results were tested at 95 per cent level of significance ($p < 0.05$) using χ^2 test.

The study has used multinomial logit regression (MLR) to estimate the adjusted effect of socioeconomic predictors on life style diseases. Further, for better comparison of the results, the coefficients of MLR were converted to adjusted percentages by using the conversion model of multiple classification analysis (MCA) which is defined as:

$$Z_1 = Log\left(\frac{p_2}{P_1}\right) = a_1 + \sum b_{1j} * X_j$$

$$Z_2 = Log\left(\frac{p_3}{P_2}\right) = a_2 + \sum b_{2j} * X_j$$

$b_1 + b_2 + b_3 = 1$

where:

a_i i = 1, 2   : constants.

b_{ij} i = 1, 2; j = 1, 2......n : multinomial regression coefficient.

P_2 : estimated probability of having LSDs score of one disease among the older women population.

P_3 : estimated probability of having LSDs score of at least two diseases among the older women population.

P_1 : (no LSDs score) is the reference category.

The steps of Multinomial Logistic Regression are defined below:

Step 1. Using the regression coefficient and the mean values of independent variables, the probability is computed as:

$$p_i = \frac{\exp(Z_i)}{\{1 + \sum \exp(Z_i)\}}, i = 1,2,3 \ and \ p_3 = 1 - p_1 + p_2$$

where Z is the estimated value of response variables for each variable category.

Step 2. To obtain the percentage values of the estimate, the probability P is multiplied by 100. In this way, the adjusted percentages of the tables were generated.

The study has used SPSS 17 and STATA 11 software programs for the statistical analyses.

Results

Figure 1 shows the percentage of elderly women suffering from the diseases of longevity. It is clearly visible that a high proportion of elderly women (38%) suffer from the problem of blood pressure followed by diabetes (18%) and less than ten per cent of them report heart problems. The figure thereby reveals that even the elderly women are not immune from lifestyle diseases. We, however, acknowledge that the percentage of elderly women suffering from any of the LSD considered for the analysis is less than 40 per cent but considering the increasing proportion of elderly population its mammoth size is enough to seek the attention of policy makers.

Figure1
Disease of Longitivity and Elderly Women, India, 2004–05.
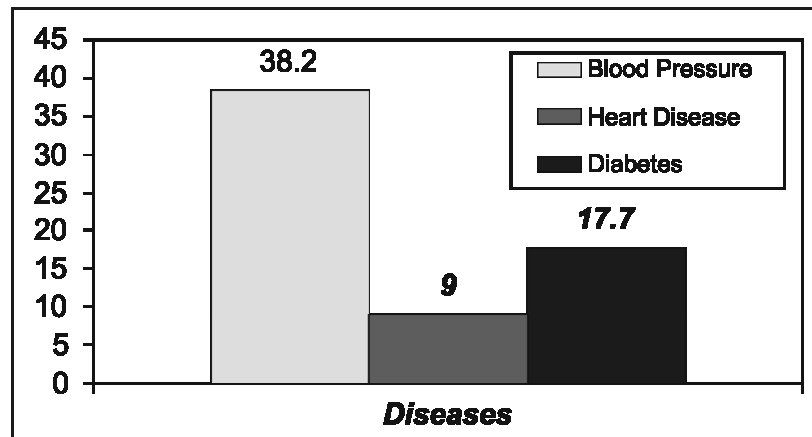
The study has classified the sample of elderly women in two age groups: population aged 60–69 years referred as older old and population aged 70 years and above as the oldest old population. Table 1 reflects that there is a larger share of older old population in the sample (63%) as compared to the oldest old population (37%). With regard to the place of residence, majority (76%) of the older women resides in rural areas. The results indicate the low level of literacy among women as more than 75 per cent of the study population is illiterate and only six per cent of them have received education for ten

years or more than ten years. Since women are biologically stronger than male and early marriage of the girl child was very much prevalent in earlier days, a large proportion of women were forced to live a life of widow. In our sample, 56 per cent of the elderly women are widow. The religious compositions of the older women population mirror the distribution of the general population of India, with the majority of the older women belonging to Hindu (84%), followed by Muslim (9%) and the rest as the others (7%). Similarly, the caste composition of the older women reflects the highest proportion of OBCs (42%), followed by other castes (33%) and SCs/STs (25%). Sixty three per cent of the elderly women belong to non-poor household whereas, 37 per cent of them belongs to poor households. The descriptive statistics reflects that the distribution of sample and un-weighted sample is enough to carry the robust statistical analysis, however, in few of the cases the sample is less than the required size, therefore for sophisticated analysis those variables were not considered.

Table 1

Percentage Distribution of Study Sample by Background Characteristics, India, IHDS, 2004–05

Background Characteristics	Percentage	N
Age		
Old-old (60–69)	62.61	5,488
Oldest-old (70+)	37.39	3,453
Residence		
Rural	75.80	6,320
Urban	24.20	2,621
Caste1		
SC/ST	25.42	2,189
OBC	41.50	3,574
Others	33.08	3,178
Religion2		
Hindu	83.94	7,372
Muslim	9.32	829
Others	6.75	740
Education		

Cont'd...

No schooling	77.63	6,757
1–4 Years	7.00	661
5–9 Years	9.14	899
10 and Above	6.23	624
Wealth Status		
Poor	37.46	2,993
Non-poor	62.54	5,687
Marital Status3		
Currently married	42.96	3,864
Widowed	55.83	4,969
Others	1.21	108
Family type		
nuclear family	29.31	2,682
Joint family	70.69	6,259
Total	100	8,941

Note:
1. For caste variable, others category includes Brahmin and others.
2. For religion variable, others category includes Christian, Sikh, Buddhist, Jain, Tribal, Others and None.
3. For marital status variable, others category includes single, sep/div, sp. absent, no gauna.
4. All percentage are taken of valid cases after excluding missing cases.

N= Un-weighted cases.

Source: IHDS, 2004–05.

Table 2 reflects the distribution of elderly women based on the self reported diseases considered for the analysis. In consistency with the above figure, the table shows that a larger proportion of older women had a problem of abnormal blood pressure followed by diabetes and heart disease. The table depicts that, with the increase in the age of women, a decline in the percentage of women reporting abnormal blood pressure and the other two diseases, i.e., heart disease and diabetes also depicted the same pattern. A higher percentage of elderly women living in rural areas reported the problem of abnormal blood pressure and diabetes as compared to those living in urban areas. With regard to heart disease, however, women living in urban areas have more problems as compared to those living in rural areas. There is marked difference in the rural and urban lifestyle which is further revealed by the difference in the pattern of the lifestyle diseases.

Among the social and religious groups, a higher percentage of women of other caste groups and Hindu religion have the problem of abnormal blood pressure, heart disease and diabetes. Similarly the illiterate section of the society has higher percentage of the elderly women suffering from any of the three ailments as compared to their literate counter parts. As per the expectation, there is a greater concentration of elderly women suffering from the disease in the economically better off section of the society and the difference being quite huge as it was 68 per cent and 32 per cent for non-poor and poor women suffering from blood pressure; 70 per cent and 30 per cent for heart disease and 83 per cent and 17 per cent for diabetic elderly women. A higher percentage of women reported the problem of abnormal blood pressure (65%), heart disease (65%) and diabetes (61%) who were living in joint family. To sum up, the results revealed that women suffering from any of the diseases considered for the analysis belonged to older old age group, rural areas, better off section, illiterate and living in the joint family.

Table 2

Distribution of Elderly Women Suffering from Lifestyle Disease Across
Background Characteristics, India, IHDS, 2004–05

Background Characteristics	BP	N	Heart	N	Diabetes	N
Age						
Old-old (60–69)	63.1	396	53.5	91	64.3	212
Oldest-old (70+)	36.9	274	46.5	79	35.7	121
Residence						
Rural	60.7	344	45.9	71	52.2	161
Urban	39.3	326	54.1	99	47.8	172
Caste[1]						
SC/ST	14.3	88	*	18	13.2	42
OBC	39.9	244	24.5	42	37.3	123
Others	45.7	338	63.2	110	49.5	168
Religion[2]						
Hindu	76.9	497	78.4	128	72.4	241
Muslim	9.0	70	*	20	8.6	30
Others	14.1	103	*	22	19.0	62
Education						

Cont'd...

No schooling	58.0	346	57.8	97	45.6	153
1–4 Years	14.5	116	*	19	13.2	41
5–9 Years	19.3	144	20.0	37	27.9	96
10 and Above	8.2	64	*	17	13.3	43
Wealth Status						
Poor	31.7	161	29.5	44	17.0	51
Non-poor	68.3	494	70.5	121	83.0	268
Marital Status[3]						
Currently married	37.0	256	41.1	74	47.7	167
Widowed	62.4	406	58.3	94	51.2	162
Others	*	8	*	2	*	4
Family type						
Nuclear Family	34.7	217	35.2	59	39.4	135
Joint Family	65.3	453	64.8	111	60.6	198

Note: 1. For caste variable, others category includes Brahmin and others.
      2. For religion variable, others category includes Christian, Sikh, Buddhist, Jain, Tribal, Others and None.
      3. For marital status variable, others category includes single, sep/div, sp. absent, no gauna.
      4. All percentage are taken of valid cases after excluding missing cases.
* = the cases are very low so percentages are not shown.
N = Un-weighted cases.
Source: IHDS, 2004–05.

Table 3 reflects the distribution of elderly women by the presence of number of disease considered for the analysis (BP, Heart disease and Diabetes). The table shows that majority of the older women suffered more from 1+ diseases; the incidence of multiple diseases is, therefore, common among elderly women. The table depicts a decline in the reporting of these diseases of longevity with the increase in age. It could be because of under reporting of the diseases due to lack of knowledge or with the advancement of age, the health complications tends to increase and so it is most likely that attention gets deviated from these diseases to other complicated morbidities among oldest old population. A higher percentage of the elderly women belonging to the non-poor section of the society have reported the presence of any of the three ailments (No LSD, one LSD and atleast two LSDs) as compared to the poor section of the society which remained true for multiple LSDs as well.

Table 3

*Distribution of Elderly Women Suffering from Lifestyle Disease Across
Background Characteristics, India, IHDS, 2004–05*

Background Characteristics	No LSD	N	One LSD	N	At Least Two LSD	N
Age						
Older (60–69)	58.70	466	59.97	143	61.17	109
Oldest-old (70+)	41.30	346	40.03	93	38.83	72
Residence						
Rural	77.91	600	52.43	113	51.34	85
Urban	22.09	212	47.57	123	48.66	96
Caste[1]						
SC/ST	20.03	173	*	26	*	22
OBC	43.60	328	34.79	82	31.96	54
Others	36.37	311	51.65	128	55.96	105
Religion[2]						
Hindu	86.34	696	80.96	184	65.71	125
Muslim	7.52	66	*	25	*	16
Others	6.13	50	*	27	25.39	40
Education						
No schooling	76.54	621	54.75	130	40.90	74
1–4 Years	8.00	63	*	25	18.36	30
5–9 Years	9.19	77	21.95	54	28.28	54
10 and Above	6.28	51	*	27	*	23
Wealth Status						
Poor	37.58	297	23.93	49	22.45	37
Non-poor	62.42	478	76.07	179	77.55	137
Marital Status[3]						
Currently married	40.24	319	50.23	125	38.59	72
Widowed	58.32	477	48.93	109	60.50	106
Others	*	16	*	2	*	3
Family type						
nuclear family	33.22	257	44.07	104	32.81	60
Joint family	66.78	555	55.93	132	67.19	121

Note: N= Un-weighted cases.

* = the cases are very low so percentages are not shown.

1. For caste variable, others category includes Brahmin and others.

2. For religion variable, others category includes Christian, Sikh, Buddhist, Jain, Tribal, Others and None.

3. For marital status variable, others category includes single, sep/div, sp. absent, no gauna.

4. The variable "Life style disease" is computed by using three life style diseases namely "High BP" "Heart disease" and "Diabetes" into three categories 1"No LSD" 2"One LSD" 3"At least two LSD".

5. All percentage are taken of valid cases after excluding missing cases.

Source: IHDS, 2004–05.

Table 4

Multi-nominal Results of Life Style Diseases Among Elderly Women Across Background Characteristics, India, IHDS, 2004–05

Background Characteristics	No LSDa	One LSD	One plus LSD
Age			
Old-old (60–69)	69.22	18.90	11.88
Oldest-old (70+)	67.61	22.39	10.00
Residence			
Rural	74.80	17.19	8.01
Urban	49.25	29.71**	21.04***
Caste[1]			
SC/ST	80.38	12.42	7.20
OBC	67.33	22.15	10.52*
Others	61.30	23.72**	14.98*
Religion[2]			
Hindu	69.46	20.46	10.08
Muslim	69.21	21.83	8.96
Others	57.32	14.89	27.79***
Education			
No schooling	76.49	17.34	6.17
1–4 Years	69.80	16.23	13.97***
5–9 Years	58.59	23.45	17.95***
10 and Above	40.05	34.55***	25.40***
Wealth Status			
Poor	80.21	12.79	6.99
Non-poor	62.06	24.41**	13.52**
Marital Status3			
Currently married	68.80	19.38	11.82
Widowed	68.02	21.86	10.13
Others	76.24	14.43	9.33
Family type			
Nuclear family	69.58	19.43	11.00
Joint family	68.45	20.36	11.20
Least regression x2 (26) = 279.53			
Prob. x2 = < 0.0001			
Pseudo R2 = 0.0952			

Note: Significance levels at CI–95 per cent: *p < 0.05, **p < 0.01 and ***p < 0.001.

a – reference category.

1. For caste variable, others category includes Brahmin and others.

2. For religion variable, others category includes Christian, Sikh, Buddhist, Jain, Tribal, Others and None.

3. For marital status variable, others category includes single, sep/div, sp. absent, no gauna.

4. The variable "Life style disease" is computed by using three life style diseases namely "High BP" "Heart disease" and "Diabetes" into three categories 1"No LSD" 2"One LSD" 3"At least two LSD".

5. All percentage are taken of valid cases after excluding missing cases.

Source: IHDS, 2004–05.

Table 4 presents the adjusted percentages (multinomial regression estimates) of the elderly women by the disease scores and their background characteristics. The score is allotted based on whether a person is suffering from LSD or not, and if yes, number of diseases a person is suffering from out of the three LSDs considered for the analysis (High BP, Heart disease and Diabetes). Further, for better understanding of the results, the scores are classified into three categories: "No LSD", "One LSD" and "Atleast two LSD". The table depicts that, in the older old age group, a considerable percentage of elderly women (19%) were suffering from any one of the ailments and 12 per cent with at least two of the diseases. And this holds true for the oldest old age group as well. More than 50 per cent of the elderly women residing in urban areas had at least one lifestyle disease, whereas only one fifth of the rural women had lifestyle disease. Among the social groups, around 20 per cent of SC/ST elderly women were suffering from at least one of the LSDs which have increased to 33 per cent and 39 per cent when OBC and other categories were considered respectively. Elderly women, in case of religious affiliation, who were suffering from one of the LSDs was more concentrated among Muslim community; however, with regard to reporting of multiple LSDs there is less concentration of elderly women among Muslims. Further, results show that the prevalence of LSDs is equally prevalent among educated and non-poor section of the society. As education increases the reporting of LSDs also increases; around 60 per cent of elderly women with education of 10 or more years have reported to suffer from at least one of the LSDs as compared to 24 per cent of elderly women with no schooling. The reporting of LSDs follows the similar direction for the difference in economic status as 30 per cent of the women who reported the presence of at least one LSD belongs to non poor household which reduces to 20 per cent for poor household.

Discussion and Conclusion

The increase in the proportion of elderly population is so huge that the present century has been termed as the "century of the aged". There is an urgent need to look into the allocation of resources as the needs of elderly are different which needs to be met differently.

Overall, results show that life style diseases are a matter of concern for elderly women; however there is a decline in the reporting of diseases with the increase in the age of elderly women. In other words, there is less reporting by oldest old women as compared to older old women. However we suggest two possibilities behind such results; one reason could be that there is less understanding of various morbidities among oldest old women which often leads to under reporting. Second, since with increase in age, it is largely believed that health deteriorates and so there may be less attention paid to the health of the elderly population.

The overall prevalence of LSDs is high in urban population compared to their rural counterparts in consistency with the other studies that have revealed higher vulnerability of urban population to Life style diseases (Poulter NR, *et al.*, 1985; Opie LH and Seedat YK, 2005; Puoane T, *et al.*, 2002; Bourne LT, *et al.*, 2002; Douglas JG, *et al.*, 2003; Bovet P, *et al.*, 2002) as urbanisation is associated with more stress, dietary changes and acculturation (Poulter NR, *et al.*, 1985; Seedat YK, 2000). The study reveals a strong positive association of reporting of LSDs with the economic status and education. Better educated and well off section of the society has better access to health care knowledge and facilities which explains the paradoxical finding of the study. The results also draws support from previous studies which have proved that education and wealth have strong influence on the epidemiologic transition because these factors are associated with adoption of sedentary lifestyle and deleterious health behaviors, which lead to the atherosclerotic diseases (Pearson TA, 2003; Wong MD, *et al.*, 2002).

The study clearly portrays that life style diseases are a matter of concern for Indian elderly women. These are the disease that can be prevented by providing proper knowledge about the nutrition and health care practices. Primary prevention must aim at reducing the risk factors among elderly women who are at greater risk of LSDs. The study clearly points out the oldest old and those who are residing in urban area are the vulnerable population. Appropriate policies and educational programmes could help in bringing out the desired behavioural change in the population. On the other side, cost-effective

methods for detection and management of theses lifestyle diseases should also be made within the reach of common man. The study also point to the need of separate geriatric hospitals keeping in mind the changes in family structure and increasing number of elderly population so as to ensure a good health status to the elderly.

Ethics Statement

This study was based on anonymous public use data set with no identi-
fiable information on the survey participants. Survey data can be
made available upon the request for academic use on the website of
the ICPSR[3] at, http://www.icpsr.umich.edu/icpsrweb/DSDR/
studies/22626, and it does not require ethical approval.

Notes

1. The study is focused on those elderly women who have gone for the diagnosis of the disease.

2. An index of economic status (wealth quintile) for each household is constructed using principal components analysis (PCA) based on the household data. The wealth quintiles are based on 30 assets and the housing characteristics. Each of the household asset is assigned a weight (factor score) generated through PCA. The resulting asset scores are standardized in relation to a normal distribution with the mean of zero and standard deviation of one. Then, the values of the wealth index was subsequently divided into five quintiles – poorest, poorer, middle, richer, and richest – however, for analytical purpose the bottom two quintiles (lower 40%) were considered as poor and remaining three were as non-poor. This classification is consistent with previous studies (Joe W, *et al.,* 2009).

3. The ICPSR (Inter-university Consortium for Political and Social Research) is the world's largest archive of digital social science data established in 1962.

4. The ICPSR (Inter-university Consortium for Political and Social Research) is the world's largest archive of digital social science data established in 1962.

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Elderly Widows Destitution in Yenagoa, Nigeria

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ABSTRACT

This descriptive study on 13 elderly widows living in Yenagoa, was conducted to explore the possible factors contributing in the destitution of widows and to find out their experiences. They were interviewed using a semi-structured interview guides in order to identify and examine the factors that contribute to increasing number of elderly widows in destitution. The findings of the study revealed that elderly destitution was caused by social, economic and cultural factors. The widows became destitute and socially isolated through causes such as divorce, lack of social support, social stigma, labelling, rejection and homelessness. Economically, widows became destitute because of poverty, lack of job, social security, and disinheritance. Culturally witch craft, abuse from in-laws, humiliation, inheritance troubles, polygamy, remarriage and disobedience of social norms were identified as causes of destitution. Most elderly widows in destitution live under or abandoned buildings or spoiled buses. There is no source of medical treatment thus causing ill health. For such a community it is suggested that the concept of remarriage and inheritance must be considered to make it possible to have their say and to take decision

whether to remain widow, or remarry, be inherited or divorce so as to live a normal life.

Key words: Elderly widow, Neglect, Social support, Destitution, Street people.

The rapid growth in the size of elderly population has prompted concerns about the elderly people in later life by taking into account both the individual and the setting in which the elderly person lives as well as the negative effects of old age and the psychological effects that these posed on the aged population (Adeyanju, *et al.,* 2014). Extended family is partially useful in giving support to older women facing widowhood and bereavement. Studies have shown that the extended family does function effectively at such times by providing emotional, social and financial support (Okumagba, 2011).

Among the various functions performed by the family, taking care of the aged is important one (Kalyan, 2013). However, as people are surviving longer, the quality of life at the very old days of survival, calls for greater demand of caregiver's service. Even when they live with their children, son, daughter-in-law or daughter, son-in-law or other younger members of the family, often being pre-occupied with the demand of their job, may not be available to provide the type of care service needed particularly for those who are very adversely affected by the ageing process (Kalyan, 2013).

Today, many elderly people including widows are found wandering around in pathetic physical conditions, begging for alms and sleeping at indecent open places (which make the community see them as having mental illness); yet little or no concern is shown by either the community or the government to remedy their pathetic situation (Fajemilehin, *et. al.,* 2007).

This phenomenon of destitution is marked by a series of social, cultural and epidemiological implications due to the greater prevalence of morbidity and functional disability in this age group. Majority of elderly widows lack functional status which is an individual's ability to live independently and to relate to their environment or to perform normal daily activities required to meet basic needs, fulfill usual roles and maintain health and well-being (Mohan and Falguni, 2013).

Today's homeless include people of every age, sex, ethnic group, widows and family type. Many are long-standing residents of their communities and have some history of job success (National Coalition for the homeless, 1987, 2005). These elderly widows living in poverty often resort to brief stays in shelter or in their temporary accommodations. Their homelessness lackof employment opportunities, lack of education, disinheritance or domestic violence may result in destitution. Such issues lead to persistent poverty and need to be addressed properly so that they may find stable housing and quality of life (Bolla, 2007).

Consequently, elderly widow destitution is one of the major social problems for family and community's integrity in Ijaw culture. Rural communities, despite their peaceful images are not immune to homelessness but rural people are often more likely to help one another, therefore family and friends often provide for temporary housing to their neighbours who have no place to live. Elderly widows in destitution who live on the street are the poorest by those more fortunate as faceless, nameless, invisible, inaudible entities. This presents a lot of challenges for Public Health and Community Health Nursing.

When the breadwinner of a family dies, all sorts of promises come from members of the husband's family. Most of these promises, though reassuring, are insincere and therefore empty. As soon as the deceased is buried, the widow is asked to arrange for inheritance. In the event of a refusal by the widow, in some families she is evicted (Ayodele, 2014). African culture subdued their women and put them in the throes of widowhood agony, these widows may remain among the most vulnerable and destitute women in the world (Ibid.). For this reason, research into the nexus between widowhood and African culture is the intervention which is missing and now is seriously required (Ibid.).

Only a few researches on elderly widows, deal with widows' living conditions and strategies or adjustment after losing the spouse (Johansen, 2004; Wall, 2002). A comprehensive research into the dimensions of widowhood practices that expose African widows to destitution is intensely inadequate (Ayodele, 2014). In this background

the present study was an attempt to fill gap by providing answers, and by using the experiences of the Ijaweldely widows of Nigeria.

Objectives of the Study

1. Document the causes and effects of destitution on the health and well-being of the elderly widows in Yenagoa, Nigeria.

2. Identify the effects of socio-cultural and environmental factors on elderly widows in destitution.

3. Assess the extent to which supports from community members around them affected the psychological and health problems of the elderly widows in destitution.

4. Identify the coping strategies and methods used by the elderly widows in meeting their needs.

5. Evaluate the effectiveness of nursing, psychological and medical services available for the elderly widows in destitution.

Methods

The Setting of the Study

The two initial studies were conducted in four wards of a federal medical centre in Yenagoa, Nigeria and within Yenagoa community respectively. This study is based on four years follow up of post widowhood experiences of some of the Ijaw elderly widows belonging to various communities in Yenagoa. The major languages of the subjects were ijaw, Epie, and Pidgin English (Dantoriti Ventures, 2007). For administrative convenience, Yenagoa was divided into three major state constituencies namely: Epie-Attisa, Gbarain-Ekpetiama and Okordia-Biseni-Zarama. The people of Yenagoa like any other Ijaw and Epie towns and villages are characterized by a similar cultural system, norms and value. Yenagoa was originally an agricultural community until 1996 when it became the headquarter of Bayelsa state, which made Yenagoa to be the major commercial city in the state (Ibid.).

Sample

About four and a half years ago, during the first stage of study, 72 elderly widows were selected for the study. Out of the 72 initial

respondents (elderly widows) were followed up for more than 2 years. Ten (10) widows (13.89%) died within 2 years (7 elderly widows died within the first one year and 3 died between 1 to 2 years) 2 (2.78%) had relocated to unknown places and the remaining 2 (2.78%) refused to participate in the second stage of the study.

In two years later, during the second stage of study, 58 elderly widows participated in the study. The average age of the participants was 65.64 years with a range of 62–84 years. Out of the 58 elderly widows participated in the second study that was followed up for four years (making 4 years after the death of their husbands). Twelve elderly widows died within the second to forth year (6 elderly widows died in the third year and 6 died between third to fourth year).

This study is based on the third stage. 13 elderly widows in destitution participated in this study. 4 community chiefs, who had seen and could provide information about the incidence of the elderly widows in destitution in the community, were also interviewed.

The average age of the participants was 69.82 years with a range of 64–86 years. Twelve (92.31%) were Christians while 4 (30.76%) of them were self-employed. Six (46.15%) of the respondents had no formal education, 6 (46.15%) had primary education, 1 (7.69%) had higher education. Majority of the respondents 6 (46.15%) were farmers.

Tools Used

Interview schedule and observation methods were used to collect data from the elderly widows. The interview guide or schedule consisted of four sections A to D to access socio-economic status, psychosocial life of the elderly widows, possible factors for the increased number of elderly widows in destitution and to explore with elderly homeless widows experiences and the views of the community members in close proximity with them on destitution. The question-naire for the elderly widows had 45 items all together. The Four community members who served as the key informants were separately interviewed to buttress the findings from the elderly widows.

Procedure

Consent was sought before the study from the local government council, from the community traditional leaders and the elderly widows in destitution themselves. Confidentiality was assured to respondents before the data collection. The interview day and time was decided by each respondent in consultation with their community heads, some of them acted as the key informants. The respondents were interviewed separately.

For this study, which is the third stage of large study, the interviews were conducted in 2 steps. The first step of the interview was conducted on all the 46 elderly widows who were still alive. All these participants participated in the initial first and second stages of the study (2 and 4 years ago) The second step of the interviews was for 13 elderly widows who were also the subjects in the initial stage of the study and were in destitution and also fulfilled the criteria for this study.

These thirteen elderly widows were also selected for the second step of the study. Each interview session lasted between 10 and 12 minutes with an average of 11 minutes. Data collection took 10 weeks. The key informants were recruited using convenience sampling techniques from the traditional rulers and community leaders. In the selection of these persons place of the residence and same socio-cultural background were considered. Key informants', interviews were taped recorded. These semi structured individual interviews were conducted face to face by the researcher. This was useful in checking and balancing the information received from the elderly widows.

Preparation of the Community

The researchers visited each of the elderly widows at least twice within the first two years of widowhood and twice within the second two years (home visiting) making it four times within the last 4 years of their widowhood. This enhanced high response rate and co-operation from the elderly widows.

Data Analysis

The responses of widows were tape-recorded and the recorded responses were transcribed and translated from Ijaw Language to

English Language each day. Later on, the responses were coded, arranged, and analysed in different categories and themes and finally triangulated. Transcription of tape recordings of all interviews were written up for completeness. Data collected from different sources and from different methods for the study were triangulated to complete the information.

Data were analysed by using appropriate statistical techniques. Content analysis was made by coding, categorizing and abstraction of data before computer analysis was done by the use of NVivo version 9 on pc and thus it was possible to sort and then to compare responses of both the elderly widows in destitution and the community leaders in the vicinity from where the elderly widows destitute were found.

Results

A total of 13 elderly widows in destitution, who participated in the first and second stage of the study, participated in the third stage of the study, The elderly widows in destitution who have relocated were searched from the whole community and in uncompleted buildings in the area. Interviews with the community leaders revealed that the elderly widows who were found roaming in the streets, they were either evicted from their families as a result of remarriage or disinheritance. The community leaders explained further that these elderly widows scared to go back to their relations and/or had become homeless after their escape from the scene of humiliation as a result of widowhood rites. In such situation, they move about looking for the place where they can get food to eat, shelter and support.

Table 1
Posture Assumed Mostly by the Elderly Widows in Destitution
Due to Lack of Furniture Where they Reside

	Posture	Frequency	Percentage
1.	Sitting	4	30.77
2.	Bending	1	7.69
3.	lying	3	23.08
4.	Standing	5	38.46
	Total	13	100

As shown in Table 1, the common posture assumed by the elderly widows in destitution due to lack of furniture in the place where they reside, revealed that (30.77%) of the respondents had something to sit. (7.69%) of the respondents either stood or knee due to lack of furniture for them to sit but the majority (38.46%) claimed they usually stand up and move around the street for most part of the day to look for food.

Table 2
Reasons of their Destitution

Categories	Remarried with the Deceased Husband Brother (n=5)	Remarried Outside the Deceased Husband Household (n=2)	Permanent Widows/ Refused to Remarry (n=3)	Disowned and Thrown-Out of their Husband House (n=3)	Total (n=13)
Problems of inheritance	4 (80)	2 (100)	3 (100)	3 (100)	12 (92.3)
Unemployment	4 (80)	2 (100)	3 (100)	2 (66.67)	11 (84.62)
Widow inheritance	4 (80)	2 (100)	2 (66.67)	2 (66.67)	10 (76.92)
Housing problems	5 (100)	2 (100)	3 (100)	3 (100)	13 (100)
Hostility	3 (60)	1 (50)	2 (66.67)	3 (100)	9 (69.23)
Economic constraints	5 (100)	2 (100)	3 (100)	3 (100)	13 (100)
Rivalry from other wives of the inheritor	5 (100)	2 (100)	—	—	7 (53.85)
Poor social support	4 (80)	1 (50)	2 (66.67)	3 (100)	10 (76.92)
Marginalization from inheritor/new husband	3 (60)	1 (50)	—	—	4 (30.77)
Labeling and stigmatization	4 (80)	1 (50)	2 (66.67)	3 (100)	10 (76.92)
Death of the second husband	2 (40)	2 (100)	—	—	4 (30.77)

Figures in the parentheses indicates percentages

From the responses, grouped into different categories based on the widowhood experiences and post widowhood marital status of the sample (see Table 2), the reasons for the destitution may be deduced. The reasons given by widows of the sample were based on individual elderly widows situations and conditions. These reasons were ranging

from rivalry from other wives of the inheritor , death of the second husband, economic constraints due to disinheritance and rejection that led to throwing them out of their husbands' houses and other such reasons (see Table 2).

Table 3
The Common Health Hazards Perceived by Elderly Widows in Destitution

	Health Hazard	Frequency	Percentage
1.	Exposure to rain	13	24.07
2.	Exposure to ultraviolet ray	13	24.07
2.	Exposure to mosquitoes and other insects	13	24.07
4.	Exposure to dust	4	7.41
5.	Exposure to accident	3	5.56
6.	Exposure to rape	8	14.82
	Total	54	100

* Some of the respondents mentioned more than one health hazards

The common health hazards reported (see Table 3) by respondents were: exposure to mosquitoes and other insects (24.07%), exposure to rain (24.07%), exposure to dust (7.41%) while exposure to street accidents (5.56%) and exposure to rape (14.82%).

Table 4
The Common Health Problems Encountered by the Respondents

	Health Problems	Frequency	Percentage
1.	Backache	8	14.82
2.	Headache	7	12.96
3.	Cattarh and cold	9	16.67
4.	Malaria	10	18.52
5.	Cholera	2	3.70
6.	Asthma/chest pain	5	9.26
7.	Skin rashes	5	9.26
8.	Diarrhoea	6	11.11
9.	Tyohoid fever	2	3.70
	Total	54	100

* Some of the respondents mentioned more than one health problems.

The health problems (see Table 4) encountered by these destitute respondents were: weather conditions which included catarrh and cold 16.67 per cent, malaria 18.52 per cent, Headache 14.82 per cent, Skin rashes 9.26 per cent, Backache 14.82 per cent, Diarrhea 11.11 per cent and Typhoid fever 2.7 per cent.

Table 5
Distribution Based on Methods of Refuse Disposal Adopted by the Respondents

	Disposal Methods	Frequency	Percentage
1.	Open dumping	8	61.54
2.	Dumping in the drainage	2	15.38
3.	Dumping in the streams/rivers	2	15.38
4.	Open burning	1	7.7
5.	Screw	—	—
	Total	13	100

Table 5 revealed that 61.54 per cent of the respondents adopted the method of open dumping, 15.38 per cent dumped their waste in rivers and streams, while 15.38 per cent adopted dumping in drainage and open burning system was adopted by 7.7 per cent.

Discussion

Three sources were identified to find out the reasons for destitution of these elderly widows: the elderly widows themselves, the community leaders (who served as the key informants) and the facilitators. The study also revealed that main reasons of destitution were social, economic and cultural factors and these factors prevented them from meeting their needs and basic amenities of life such as foods, clothing, shelter and medicines.

Social destitution includes the factors like divorce as result of the death of the husband and refusal of inherited property of late husband by the late husband's brother, lack of social support by relatives, domestic violence, social stigma and labelling from the side of in-laws and the community members. The social rejection leads to homelessness and loneliness.

Lack of affordable housing due to high cost of housing, the economically deprived elderly widows were incapable of renting even a small place to live. The economic destitution led them homeless. Due to extreme poverty and lack of financial stability, lack of job, lack of social security and disinheritance pressurized them often to resort to brief stays in uncompleted buildings, or abandoned buildings or in spoiled buses with tattered roofs or temporary accommodations that were not conducive for human habitation.

Bewitchment, abuse and humiliation from in-laws and community people, inheritance troubles due to polygamy, remarriage, widowhood rites and disobediences of social norms were also identified as cultural causes of destitution.

Majority of the elderly widows in destitution live in poverty, social rejection and without proper accommodation to live in. some other challenges they face include, re-settlement, willingness to return, family re-integration, attitudes of the community members, adaptation to new environmental conditions, and living a life that is against their cultural tradition.

The willingness to return back to their husbands' place or re-settlement intentions of the elderly widows in destitution, could have lots of consequences. Re-settlement has been linked to mental health conditions of the victims going back to in laws in. Although, elderly widows experiences in destitution results in loss of meaningful social roles, economic hardship, social isolation, homelessness and loss of important life projects but despite these difficulties they prefer to continue to live in odd situations than to go back to their husbands' place because majority of them reported that going back to in-laws is like jumping from frying pan to fire. These elderly widows although valued African culture and norms of traditional familial care and extended family setting, were of the view that they will not be able to receive familiar support and they would be lonely, depressed, unhappy and dissatisfied with their lives, may even die in frustration or end up again in destitution for survival.

Majority of the elderly widows in destitution who had no socio-economic support reported health related problems such as aches, pains, general weakness of the body, cold, catarrh, and cough since they sleep in opened places. Fajemilehin (2007) was also of the

view that the elderly in destitution lack good hygiene and nutrition, and equally suffer from self-neglect and mental confusion. The study revealed that there is a need for focused health education for the households and caregivers of the elderly widows in this community.

The findings of this study revealed that the elderly widows were disowned and turned out from their deceased husbands' houses on the pretax of their refusal to marry the younger brother of the late husband or on the reason of inheritance. The refusal of this type of proposal is one of the main factors that caused poverty, unhappiness and homelessness in elderly widows. Lack of adequate support from the immediate households consequently led to their homelessness. This was supported by Ogungbamila and Adeyanju (2010) and Adeyanju and ogungbamila (2013) that "the widows are encouraged to re-marry the kinsmen of their deceased husband and if a widow disagrees with the decision of the family, the widow would be subjected to humiliation and subjugation and is deterred forever laying claims to personal properties of her husband, and they might link her as the cause of the death of her husband".

Some of the elderly widows who remarried either from their deceased husbands' kinsmen or outside were also faced with lots of rivalries from other wives living in the same house, in a polygamous setting and it is even worse and accompanied with labelling if their new husband died within 2 years of remarriage. She will be held responsible for the death of the new husband and labelled as a witch and a wife with bad luck and faces a lot of loneliness and social isolation. This view opposes the familiar conclusions deduced by Fajemilehin (2000) and Fajemilehin (2009) from their findings that elderly persons continuously living with spouse or any other familiar support are more likely to display positive health behaviour and in addition live longer. Social support reduced the risk of loneliness and social isolation. The difference in the findings is that the domestic rivalries among the wives in polygamous family settings, were not considered by these researchers.

Most of the respondents expressed that sometimes they wept loudly or silently whenever they felt:

1.   their health is in bad condition,

2. they are lonely due to their eviction and rejection,

3. extreme poverty and poor social support,

4. frustration due to marginalization,

5. harassment from people/stigma because of widowhood,

6. how they will be buried when they die and

7. inheritance experiences associated with loss of meaningful social roles and economic hardship.

As elderly widow ages and is socially neglected she faces many challenges. She loses contact with her friends and family. In this situation most of them indulge themselves in keeping pet (cat, dog or bird) as their neighbour or close friend. The pet provides security and gives signals when some other person trying to approach the elderly widow while she is sleeping. The pets' unquestioning acceptance, despite their poverty and living in destitution and other discomfort, elderly widows get joy and love from the pets. But it is also true that her pet (especially cat, dog and owl) in some cases might also be used to label her as her agent of witchcraft. It worsens their situation in the community where they reside.

Majority of the homeless elderly widows have understanding and knowledge of the hazards they are facing in destitution. This study revealed that these elderly widows believed that diseases were associated with indiscriminate refuse disposal around their abode and also believed that they were not practicing the best and most sanitary method of refuse disposal due to the condition of their accommodation. However, most of the respondents expressed that they had one time or the other suffered from diseases like dysentery, typhoid fever, dermatitis, worm infestation as a result of unsanitary refuse disposal within their area of destitution. Prompt attention involves prevention, recognition and treatment of illness and injury and requires special skills and knowledge in the field of health, rehabilitation and human relation for the care of the homeless elderly widows in destitution. They claimed there was no access to toilet, laundry facility and possible bathing in open streets and these have exposed them to a lot of health problems. This was supported by Fajemilehin, *et al.,* (2007) that the health of elderly in destitution is important and if left unattended to might lead to outbreak of infectious diseases. Robert, *et al.,* (2009)

and Meis, *et al.,* (2010); also attested to the fact that physical and social conditions in and around homeless people have the tendency of aggravating the physical and psychological health conditions of the victims of destitution.

Some of the elderly widows were also faced with psycho-social problems because they, due to extreme poverty and lack of job started begging for food, money and clothing. Such women were chased out from their husbands' house and were not given any thing to survive.

Suggestions

It is suggested here that the elderly widows in destitution should be protected and cared by the government and society. They also need love social and economic security, self-esteem, and spiritual fulfillment. To improve their living conditions housing schemes needs to be launched. They should provide guidance to overcome such situations. Nurses should also focus more on the provisions of free health care of such people. The health care services should easily be accessible to all such persons. Nursing staff should be given geriatrics nursing training. Member of society should be warned not to label them and be encouraged to have sympathetic attitude towards them.

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Social Exclusion of the Indian Rural Aged: A Study of Jhansi District in Uttar Pradesh

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ABSTRACT

The rapid rise in the proportion and size of the aged population in India has resulted in multiple problems for the aged. The weakening of social safety nets and breaking of joint family system have significantly contributed to the feeling of insecurity and vulnerability amongst the aged. The socio-economic transformation in the last few decades have rendered the aged socially excluded, particularly the rural aged who are found to have poorer levels of health and living conditions. The present study discusses the different aspects or dimensions of social exclusion amongst the rural aged of ten villages in Jhansi district of Uttar Pradesh (India). The Sample consisted of 100 rural aged, aged (60 and above) of both the sexes. An interview schedule and observation method as tools of data collection were used in this study.. The analysis of the data revealed that there were economic, social, political and cultural dimensions of social exclusion of the rural aged. These processes of social exclusion have affected the health and living condition of the rural aged.

Key words: Aged, Basic Rights, India, Rural, Social Exclusion.

The developing countries are currently ageing at an unprece-dented speed and scale. Hence in the recent years, study of the aged population has become an important dimension of social sciences. India with a current aged population of 100 million is the second country after China with large number of people aged 60 and above in the world (Prashad, 2011). Today India is home to one out of every ten senior citizens of the world. Out of the total aged population in India, the rural aged accounts for about 72 per cent (GOI, 2011). Beside the increase in aged population, other socio-economic changes in India have affected the aged severely. With the growth in the processes of industrialization and urbanization, family and kinship institutions began to undergo change (Mishra, 2005). The rural aged are immensely affected by the decline of traditional joint family system, changes in social structure, value system, and their dispersion owing to migration and increasing urbanization (Rao, 2009). The migration of the children is increasingly leaving the aged isolated and lonely. The aged are missing the important social relationships which are key to their social and psychological health. To add to it the inadequate health services and poor health care delivery in rural India further jeopardizes the health status of the aged. All this have put the aged in more isolated and excluded position, socially, psychologically and health wise.

Concept of Social Exclusion

Social exclusion is a universal phenomenon, which has existed over time and space. It is commonly used to refer to the process that denies full or partial participation of an individual in the society. The term social exclusion was first time used by Rene Lenoir in 1974, to refer to the groups of people who are mentally and physically handi-capped, suicidal people, aged invalids, drug abusers, delinquents, single parents and marginalized communities (Sen, 2004). Then this concept has gained significance in the European context as a tool to analyse the exclusionary processes of unemployment and income inequalities in the society in closing decades of the 20th century.

But in India the concept is still in its infancy and need another ten to twenty years to mature. As per its first step UGC has established the centers for study of Social Exclusion and Inclusive policy in more than 34 universities under the 10th/11th Five Year Plan so far with the

objective to study the group of people who are socially excluded from the mainstream in one way or the other. Therefore the concept of social exclusion represents a key theme in current social policy debates in India. Policy initiatives and research on social exclusion in India mainly revolve around the groups such as caste and ethnic minorities, women and children whereas the ways in which social exclusion may affect aged people have been rarely examined (Chandra, 2011).

Social Exclusion in Indian Context

In order to place social exclusion in perspective and understanding its impact on the aged people, it is important to understand the exclusion debate both in general and in the Indian context where it dates back to more than three millennia, enforced by the Hindu caste system. Exclusion discourse in Europe has generally been concerned with social problems in the labor market thrown up by economic restructuring (Radhakrishna, 2009). In India it cannot be captured by the Euro-centric approach and its labor market framework. The exclusion discourse in Indian society has to be understood against the backdrop of the caste system. For instance caste-exclusions are clear in traditional society. Membership and status are determined by birth. There is a hierarchy of social precedence among the castes with restrictions on social and cultural intercourse between castes. The castes are segregated and stratified with regard to civil and religious privileges and so on (Ghurye, 1979).

Since 1950s, social exclusion in India has assumed a wider implication, and the debates on it had a greater significance in political discourse and among academics, more recently in writings on *dalits* (backward castes), women and other underprivileged groups. Exclusion discourse also gained new meaning in the 1990s with Prime Minister V.P. Singh's decision to implement the Mandal Commission report, which intended to increase affirmative action programs for the disadvantaged. Over the years, many studies have been carried out on different aspects of social exclusion and on injustice of the historically marginalized social groups, such as the Scheduled Castes, Scheduled Tribes and Religious Minorities in India and other parts of the subcontinent but the studies on social exclusion of the aged who also belong to these social groups are very few and limited. So it is important to

look into the problems and condition of the aged as, today, they constitute a large part of our population.

Objectives of the Study

The following were the objectives of this study:

- to investigate the social exclusion of the rural aged from the economic dimension.

- to examine the social exclusion from the view point of social dimension.

- to explore the social exclusion experienced by the rural aged from the political dimension and * to examine the social exclusion of the respondents from the cultural dimension.

Methodology

Sample

100 rural elderly (60yrs. and above) of both the sexes were randomly from five villages (namely, Bawai, kurkur, Ambabai, Mau and Raksa) of Jhansi district (U.P.) .

Tools Used

A semi-structured interview schedule was constructed to find out the subjective perception of the respondents on various types of exclusions. The semi-structured interview schedule has both open and closed questions. The respondents were interviewed individually. At the time interview investigators also observed the gestures and the reactions of the respondents to the questions. These observations were recorded properly.

In order to understand social exclusion and how it affects the elderly or other groups in the society it is important to identify the different dimensions of disadvantages as the dynamic interactions between different dimensions and different levels of social exclusion over time give rise to multiple causes of social exclusion and bring on an accumulated effect on the excluded (Grant, *et al.*, 2004). Each of these dimensions of social exclusion includes different indicators to measure social exclusion. These dimensions are as follows:

Economic Dimension

The economic exclusion is concerned with questions of income and production and access to goods and services from which some people are excluded and others are not. Dasgupta's concept of economic disenfranchisement and Sen's concepts of entitlement and capabilities also emphasize on the ownership of assets and access to the resources as the essential indicators in restricting or minimizing exclusion (Bhalla and Lapeyre, 1997). In India also the National Sample Survey (NSS) in 1995–1996 assessed economic deprivation among the aged population by measuring difficulties in meeting basic needs such as food, clothing and medicines (Rajan, 2006).

Social Dimension: This dimension tries to capture the frequency of contacts with the family, friends or relatives, the absence of which points to social exclusion of the aged (Burchardt, *at el.,* 1999). It explores close social bonds within the household through relation-ships with any partner and children who live there. Barnes *et al.,* (2006) also explored close social bonds within the household and outside the household to capture the frequency and density of the contact.

Political Dimension

Exclusion from political dimensions refers to political alienation where the person has very limited or no ability to influence political parties and government policies (Brown, 2011). Exclusion from this dimension involves the lack of access to sources of power and inability or restriction to participate meaningfully in decision-making processes at the local or national level such as the absence of access to membership of various organizations or groups. It concerns the denial of particular human and political rights to certain groups of population (Bhalla and Lapeyre, 1997).

Cultural Dimension

Exclusion from this range represents an important dimension of social exclusion as it represents an inability to fully access the cultural fabric of the society. Without the right to participate in cultural life, people are unable to develop the cultural and social bonds that hold societies together (Laaksonen, 2005). Here the meaning of exclusion from cultural dimension is, essentially, non participation in cultural

activities by the aged for example, not going to tea stalls and *chaupal* (village centre), not visiting library, museum, sports club, play or dance concerts, watching movies, involving in religious activities and holidaying outside their city or village. Barnes *et al.,* (2006) also feels that the aged, in order to be culturally active, should frequently go out to cinemas, theatres, museums, etc.

Basic Rights

Human rights are the basic rights which fundamentally and inherently belong to each individual. Exclusion from basic rights such as right to food, clothing, shelter, medical service, etc, provided by the government to lead a healthy and dignified life is an important aspect of social exclusion. These rights (food, clothing and shelter) are the most basic conception (tenet) of human's well being without which human survival is not possible. Food, cloth and shelter to the citizen, is a yardstick which measures the progress a country has achieved in its democratic credentials.

Findings and Analysis

In the preceding section the authors have discussed the meaning of social exclusion and its different dimensions. The authors have also argued that the term social exclusion has always been used in reference to caste or gender or religion in Indian context. There is hardly any study in India that looks at the aspects of social exclusion of the aged. This section of the paper examines the pattern and way in which the rural Indian aged find themselves socially excluded. The authors also investigate the ability of the aged to exercise their basic rights. However before analysing the social exclusion of these aged people from the different dimensions, it would be pertinent to know about their demographic details. (see Table 1)

Exclusion from Economic Dimension

To measure the economic exclusion the authors have examined the access of the aged to market services, financial services, access to basic facilities, public distribution system (PDS) and government's old age pension. Regarding the access to market and financial services 28 per cent of the aged (who are mostly in their eighties or eighty plus) reported that they are largely confined to their villages. They unable

to visit the banks or cash counters whenever they require money and that benefit is being taken by their children or others by taking out their money and not even giving a share from that money, even at the time of need. Most of these respondents were aged widows who were also victims of the traditional cultural restrictions imposed on them as it's a belief in some villages that it is inappropriate for women to go out of the house, to argue against the male head of the family and so on. The remaining 72 per cent of the aged who are in their sixties and seventies mentioned that they visit market twice a week or once in a month but in most of the cases these aged were so poor that they could not even afford commuting so frequently.

While investigating the availability of basic facilities in the houses of the aged it was found that many of them (57%) did not have even electricity in their house and 36 per cent did not have water supply at all. A large number of aged (78%) in these rural areas also do not own consumer goods like television sets, electric fans, coolers, etc. evidently because there was no electricity in most of these houses. Regarding access to PDS, the authors found that 57 per cent of aged respondents had ration cards which allow them to avail fixed amount of wheat, rice and kerosene. However, out of this 57 per cent, only 28 per cent of them were taking benefits through these ration cards and the rest of the respondents unable to take any benefit because of their old age and poor health. They complained that they find it very difficult to wait for hours in a long queue at the shop of the ration dealer. Some of the aged reported that they were not receiving the monthly quota of ration from the ration dealers. In many cases, their children forcibly take away the food ration and they did not give any share of the ration to their parents.

Table 1
Demographic Details of the Respondents

	Male (%)	Female (%)	Total (%)
Respondents	41	59	100
Age			
60–69	53.84	46.15	39
70–79	39.39	60.60	33

Cont'd...

Cont'd...

80 years and above	25	75	28
Educational Attainment			
Primary	52.63	47.36	19
Secondary	80	20	10
High School	100	00	02
College and above	100	00	01
Illiterate	29.41	70.58	68
Marital Status			
Married	49.01	50.98	51
Unmarried	00	100	01
Divorced	00	100	03
Widowed	35.55	64.44	45
Living Arrangements			
Alone	30.76	69.23	26
With Spouse	36.84	63.15	38
With Children	39.47	51.61	31
With Others*	80	20	05

* Relatives, Friends and neighbours.

On accessing the awareness of old age pension scheme (OAP) provided by the government (state/central) it was found that only 56 per cent of the aged know about the old age pension scheme and the percentage of the aged availing this scheme was 27 per cent. When the authors inquired about the adequacy of the OAP amount, the aged who were beneficiaries, answered that the amount of rupees 300 per month (5–6 American dollar) is not at all sufficient. It was also found that they were not receiving OAP on monthly basis. At the interval of six months the state government deposits rupees 1,800 in their savings accounts. Many times, there was a delay in deposit of OAP amount. More than half of the aged respondents who were getting OAP hailed from lower socio-economic strata of society and invariably, they had poorer health status. Since OAP scheme targets the weaker and poorer section of the society, therefore it can be inferred that irregular payment of OAP, makes them very vulnerable economically. To add to it, the insufficient transfer of ration by the dealers and further misappropriation of it by their children put them at the severe risk of economic exclusion.

Exclusion from Social Dimension

The social dimensions, associated with social exclusion of the aged were mainly, reduced informal social contacts, lesser mutual visits of aged parents and children, breaking of joint family system, etc. Exclusion of the aged from this dimension is quite clear in these rural villages. When asked about their interpersonal relationship with their family, 58 per cent of the respondents replied that they were not satisfied. According to the respondents, their children who were staying with them also did not want to interact with them. Though living under the same roof the parents and children have separate living arrangement. Moreover they said that the children ignore them as they have grown older. They, in the words of the respondents, have become junks to their children, 'useless furniture in the house.'

There are 36 per cent of the aged respondents in the study whose children have migrated to urban areas. They reported that the absence of their children often makes them feel insecure and lonely. As per mutual visits of left-behind aged and their children, 13.88 per cent of the respondents said that they had mutual visit once a month. 25 per cent of them visit their children in every few months or their children come to meet them. 33.33 per cent of the aged answered that they rarely visit their children but their children pay a visit to them in one or two years during *diwali* or *dushera* (Hindu religious festivals in the month of October and November respectively). It is noteworthy that there were also 19.44 per cent of such aged parents whose children never come to meet them and 8.33 per cent of them had no children. Hence it can be inferred that the mutual visits between the parents and children are few and far between. Though there is a desire on the part of the aged parents to visit their children and grand-children on a regular basis, it does not actually happen. Either the respondents were too old or they were not keeping well or they could not afford to commute by private conveyance. In many cases, the children were not very welcoming to the idea of their parents coming over. Such forced and unforced factors of reduced social contact have turned the aged socially recluse.

Therefore, the frequency of contact within the family was not satisfactory. It was observed by the authors that the size of social networks and availability of social contact is further restricted in case

of the aged women in these rural communities. They were hardly listened to by their children. These aged women rarely visit or were visited by their children and relatives. They had minimal social support at their behest. However the situation of these rural aged women were found to be more aggravated because of their dependency for survival on male member of the family, no ownership of movable and immovable assets, patriarchal social structure and so on. Overall the aged, whether living with the children or other family members in the same house or staying alone, were not getting love and respect from the family and were not able to participate fully in family affairs. In the absence of meaningful social relationship, the aged are being socially excluded both at family and community level in their everyday life.

Exclusion from Political Dimension

The authors examined the exclusion of the aged from political process by examining their voting pattern in local, state, and central level democratic elections and assessing their membership of different organizations (like political party, religious, environmental, peasant organization, etc.).

While evaluating the political participation of the aged it was found that majority (62%) of them cast their vote during state and central elections. As far as the question of attending meetings of *gram sabha* (village level assembly) is concerned, 80 per cent of the aged in the sample responded in a negative. They stated that nobody listens to them. Their ideas and thoughts were not at all deliberated upon in the meetings. That is why many of them prefer to skip these meetings. Out of this 80 per cent, some of them stated that their poor health restricts their participation in such kind of political activities. The rude attitude of the younger generation acts as a further deterrent. Only 21.2 per cent are found to be the member of different organizations such as member of the *panchayat* (cabinet of village people, directly elected by the adult citizens of the village), peasant or environmental group. Further it was noted that the aged women in rural areas were highly excluded politically, as their involvement in all these activities was almost negligible. These older women did not even have

any say in the decision-making process of their families let alone involvement in political process at the community or village level.

Exclusion from Cultural Dimension

To measure the exclusion from cultural dimension the authors have examined the access of the rural aged to participate in the following cultural activities-going to tea stalls, *chaupal*, theatre or movies, religious activities and holidaying outside their village.

If the percentage of participation in cultural activities is taken into account, there was 39 per cent of aged who visit tea stalls, and *chaupal* but out of this 39 per cent the frequency of the aged visiting regularly to *chaupal* and tea stalls was 38.4 per cent. There were 7.6 per cent of aged who visit these places twice a day, morning and evening. 43.5 per cent of them visit once in a week and remaining 10.2 per cent of aged visit once or twice in a month. As far as going to theatre or movies was concerned, majority of the aged (63%) replied that they were very fond of all this and used to watch movies, dance programs and plays concerts whenever it took place in their villages but at the same time they also stated that: *Now what is the use of asking this question, earlier we used to enjoy watching nautanki (folk dance-play on stage or theatre) and ramlila (stage presentation of Hindu epic Ramayana) that were held in regular intervals. But nowadays there are hardly such cultural programs in the villages.*

The involvement of aged in religious activities is relatively higher. The number of respondents participating in religious activities was 69 per cent but only 46.3 per cent of them went outside their home to attend the religious functions and 53.6 per cent of the aged preferred to worship at their homes. One respondent whose name is Rambabu (name changed) asserted that *when a person grows old, it is his/her duty to engage in religious activities because there is no one at this juncture of life, neither family nor relatives except God who looks after us and remains attached to us.*

Analysing the data on aged holidaying, 39 per cent of them enjoy the prospect of visiting places outside their villages instead of sitting at one place. However, it was also found that 7.6 per cent of them visit outside their village once in a week, 46.1 per cent of them go for outing in every few months and same number of aged (46.1%) visit annually

or every few years. The reason they cited for such low frequency of outing was that the majority of them need to engage in agricultural work to earn their living so they do not get time for it. Even at their sixties and seventies, they have to work for livelihood. A few of them answered that they were too old to move out of house due to poor health.

Again 32 per cent of the rural aged reported that they were not personally invited to the festivals or to any religious function in the village or in nearby villages. Infect, their own children feel hesitant in taking them along or including them in those festivals or occasions. The family members also restrict them to attend any of the ceremonies like marriage or social gathering and generally ignore the presence of elder parents in their homes. They also lack recreation facilities such as television, radio, indoor games, etc. or if it is there then they hardly get a chance to watch their favourite programs. One can infer that age does have a bearing when it comes to the participation of the aged in cultural aspects of life.

Conclusion and Suggestions

The present findings indicate that as age increases, the aged experience social exclusion on multiple grounds. The rural Indian aged selected for the survey were found to be excluded from each of the four dimensions (economic, social, political and cultural). In rural areas, age increase is usually accompanied by income decrease. Financial weakness, lack of familial and social support makes their life more vulnerable. The interpersonal relationship of most of the aged with their family members is unsatisfactory. Lesser social bonding with the children was evident from lower frequency of mutual visits and social contacts. The study suggests that the ideas and thoughts of the aged were not entertained at the community and village level political processes. Though most of the aged were fond of cultural activities but they could not do so because of their age, changed financial, social conditions and health status.

It was also noticed that the aged women experienced more exclusion compared to aged men in rural areas. Further, when a gender comparison is made across the dimensions of exclusion, the aged women are almost completely excluded from political process. The

traditional conservative social customs and the marginalized position of rural women, particularly the aged women are responsible for such low level political participation. To sum up, the aged in rural India are affected by poor social relationship with others, lack of opportunities to participate in cultural and political activities, extremely limited access to basic services, minimal or inappropriate social security schemes and fragile economic condition.

It is suggested that grass-root level working groups, like community policing, to address the issues of safety and security of the aged, especially widows, needs to be created. Measures should be taken to create awareness among the rural aged on the importance of health through *anganwadi* centers (centers which provides basic health care in Indian villages) functioning in villages. In view of rising cost of essential commodities, not only the amount of old age pension be increased but also system must evolve to ensure speedy cash transfer to the needy aged.

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Opioids and Older Adults: A Review Article

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ABSTRACT

Physician attitudes towards opioids affect their willingness to prescribe them to their older patients with non-cancer pain. While this article review did not find fears of addiction as a major barrier in prescribing, there were concerns related to diversion and overall patient safety. The efficacy of opioids in non-cancer pain is not addressed in depth in this article; however there is much candid discussion regarding the frustrations of physicians to adequately address pain in the elderly population. This article review involved a qualitative study of providers in New York City. While the participants readily prescribed opioids, there was a greater degree of comfort in prescribing to palliative and hospice patients as opposed to chronically ill non-cancer patients.

Key words: Pain in Elderly, Opioids, Palliative and Hospice patients

The prescribing of opioids to elderly patients with non-cancer pain is a divisive topic. There are those who recommend the usage of opioids in the senior population when non-opioid treatment is ineffective. Yet there are others who highlight the significant risks associated with treating older adults with opioids for chronic pain conditions. Currently there is little data regarding providers' practice

patterns and beliefs related to opioid prescribing in the geriatric population. Spitz, Moore, Papaleontiou, Granieri, Turner, and Reid sought to investigate physician attitudes and beliefs related to prescribing opioids to their non-cancer elderly patients who reported significant pain issues. (Spitz, *et al.,* 2011) Their study uncovered barriers to using opioids as a treatment protocol as well as recommendations to assist in better managing the pain of chronically ill older adults.

A major strength of this study was the revelation that physicians did not see potential patient addiction as a factor in not prescribing opioids to senior adults. While this may prevent prescribing opioids in younger populations it really was not a factor in this study. However, the prospect of diversion of opioids in the patients' home was a barrier in prescribing. If providers felt like the patient was in an unsafe home environment this inhibited their willingness to prescribe opioids for pain management. Another significant strength of this study was the candid nature of the provider conversations, revealing frustrations in being able to adequately diagnose and control pain in their patients.

Formulation of the Problem, Purpose and Question(s)

The problem that prompted the research is the controversy surrounding the prescribing of opioids for chronic pain in the elderly. Recent research in particular has been divided on the safety and effectiveness of opioids with older adults. This was a qualitative study where healthcare providers were interviewed in focus groups, allowing candid conversation regarding their practice patterns and philosophy around opioid treatment. The study has global ramifications in that patients have a fundamental right to have pain addressed and treated. Elderly patients are no different and discovering the most effective interventions in pain management can alleviate unnecessary suffering and distress. The purpose of this study was to determine provider attitudes in whether to prescribe opioids to older adults with non-cancer pain or not. The study enabled researchers to identify both barriers and facilitators to prescribing opioids.

Researchers asked providers through a focus group methodology to share their experiences in utilizing opioids to treat non-cancer pain in older adults. The following areas were addressed in the semi-structured focus groups: provider utilization of opioids, perceived barriers and facilitators to prescribing, legal and regulatory concerns, abuse and misuse concerns and finally their comfort level in prescribing opioids to hospice and palliative patients as opposed to non-terminally ill elderly patients with chronic pain.

Study Concepts Phenomena

A prime concept in this study was to directly ask providers to explain their reluctance to prescribing as well as factors which made it easier to prescribe opioids to senior adults. The key factors in this study dealt with provider attitudes which in turn impacted practice patterns. The concepts were clearly defined in the study. There were no specific definitions given, although "older adults" throughout the article seemed to reference those in their 80's. Chronic pain was defined only in terms of comparison to cancer pain. Finally opioids were not specifically defined but the assumption was that the reader would again be able to contrast them with anti-inflammatory medications.

Literature Review and Theoretical Conceptual Bias

Much of the research associated with opioid therapy and the risks associated with it have been primarily conducted on younger populations. Issues like addiction, misuse, diversion, and dependence have been concerns with this age group. The research which has been conducted involving opioid use in older adults has produced mixed results according to the research article. Some recent research indicates that providers should utilize opioid treatment when non-opioid therapy has proven ineffective. Other research, showing the controversy of the subject matter, cautions strongly regarding its use in senior adults.

The concerns shown in the literature review involved frailty, cognition issues, associated co-morbidities and polypharmacy. These are obviously quite different than opioid use in younger adults. The

study authors pointed out that geriatricians are more likely to be less concerned about addiction issues with elderly adults than are internists, which especially makes the results of this study interesting since 91 per cent of the study participants had gone through a geriatric fellowship. The study authors referenced the 2010 Declaration of Montreal which clearly mandates pain management as an ethical duty with providers. This particular ethical responsibility helps provide a structured framework to the study as a whole. The literature review was very current and lays forth a basis for the current study: little information has been collected on the rationale behind prescribing patterns of providers relative to opioids in older adults.

Research Design

This study is a phenomenological in nature. It deals with attitudes as to why providers are reluctant or favorable in prescribing a particular type of medication. The research involved sharing a story as to what influences provider decisions (Pitney & Parker, 2009). This was a qualitative cross-sectional study using focus groups. The focus group discussion was experientially based with providers informally sharing firsthand knowledge regarding their patient population. The study involved open-ended and follow-up questions. The study questions were based upon the literature review and were pilot tested prior to the provider group sessions. Demographic information was gathered following the group discussion via a self-administered questionnaire.

Since the purpose of the study was to gather information regarding provider attitudes regarding opioid treatment in older adults, allowing a semi-structured setting where providers could freely share their views seems to be good research design. It allowed providers to discuss their practices and share what works and does not work for them. However there are a couple of noteworthy weaknesses. The researchers in their conclusion point out that group dynamics may have influenced provider candidness as opposed to one-on-one interviews with providers. Second, providers were asked to recall both the percentage of older patients with chronic pain and the percentage of older patients on an opioid. While responses are

clearly given it seems difficult to imagine just how accurate these numbers are just from provider recollection. The researchers seem to indicate that this information was gathered from the demographic survey given at the close of the group discussion. It is questionable as to how reliable this information is since it doesn't appear to have been gathered through a chart or electronic medical record audit.

Ethical Considerations

The study was approved by the Weill Cornell Medical College Institutional Review Board (IRB). No patients were directly interviewed or questioned for this study. The only participants were the providers who worked at two practices that served primarily older patients and three community health centers that served a variety of ages. The study indicated that focus groups participants had the study explained to them prior to engaging in it. It was not mandatory for any of the providers to participate. Their involvement was solicited based on their availability and interest in the subject matter. All group sessions were audio taped. The study does not indicate if the providers signed any sort of formal consent form. The largest ethical factor in the study involved part of the study's overall rationale, the fundamental right that all patients have to ensure their pain is adequately treated. The study deals with how provider attitudes impact their ethical obligation to treat pain.

Population and Sample

From the demographic questionnaire the following information was extracted regarding the providers: age, sex, race, type of provider (physician or nurse practitioner), those who had a fellowship in geriatrics, years in practice, time spend in direct patient care, residence of patients, patients with chronic pain, and patients with chronic pain treated by opioids. These providers practiced at either two geriatric physician practices or at three community health centers in New York City. All five practices served older adults who lived mainly independent in the community. The two geriatric practices had patients with greater functional and/or cognitive limitations than did those patients from the three community health centers. The patients

from the geriatric practices were mainly Latino and non-Hispanic white patients. The patients from the health centers were primarily Latino in ethnicity. They were only questioned regarding their care and treatment of chronically ill older patients.

The three community health centers were incorporated into the study to bring diversity to the research according to the study authors. However, there is some concern in lumping two geriatric practices with the three community health centers. The geriatric practices would seem to be closely associated with the setting desired by the researchers to better understand physician attitudes surrounding the prescribing of opioids in the elderly population. However, since the community health centers served a broad spectrum of ages it is difficult to gauge how many older patients the providers in them would actually see with regularity compared to the geriatric centers.

There was no exclusion criterion for the providers. Twenty-six out of 38 providers in the five practices participated. The 12 that did not participate cited scheduling conflicts as the reason why. Without explaining how the researchers knew, they indicated that the non-participants did not differ from the participants in the key demographic areas such as age, race, gender, and years of training.

The sample size was sufficient. Of the 26 participants, 23 were physicians and three were nurse practitioners. The focus groups lasted anywhere from 35 to 60 minutes and involved as few as three partici-pants and as many as eight. The mean age was 40. Seventy-seven per cent of the study participants were female, which may impact making generalizations from the findings across both sexes. The average number of years in practice was 12 and 21 out of 23 of the physicians had gone through a geriatric fellowship. Data saturation was achieved. Enough information was gathered to gain sufficient insight into the phenomenon.

Data Credibility and Trustworthiness

The focus group sessions were audio taped, transcribed and then analyzed. The transcripts were read and themes emerged based on previous studies as well as new findings. Two investigators reviewed

the focus group data separately and then met to reconcile common themes. The transcripts were then reviewed again and data from the themes were entered into analysis software to further assist with counting and sorting themes which emerged from the group sessions. Researchers were able to reach a point when no new themes arose in the research and thematic saturation was accomplished. Triangulation was an important component in this research in that previous studies were reviewed to pull together consistent themes. Audit trail was utilized as a method of ensuring dependability. The researchers clearly laid out their analysis and the process they used to reach their conclusions and findings. However, they did not calculate an index of inter-coder agreement due to the rare instances where there was any real disagreement in coding themes.

Findings and Discussion

Data for the research project was collected from focus groups. While these groups provided an opportunity for a free-flow of thoughts, they were no doubt influenced by group dynamics. These groups also took place at the end of the work day and thus may have been impacted by fatigue and a general desire to get home. However, since they were semi-structured with open-ended questions they did allow for the gathering of relevant information. The sessions were audio taped and themes were manually sorted as well as with software analysis. The data collection involved grounded theory in that clear theories were developed to help explain prescribing patterns.

The study found that 42 per cent of providers felt that opioids were an effective treatment for older patients. One hundred per cent of providers did not see opioids as the first line treatment for chronic pain in older adults. A reliable caregiver at home was viewed by 46 per cent of prescribers as a factor in whether to prescribe opioids for a patient. Conversely, if there was an unreliable caregiver, half of the providers were unlikely to prescribe an opioid to a patient. Two key themes emerged in terms of barriers to prescribing. Seventy-seven per cent of providers cited the fear of harm as a barrier to using opioids as treatment while a significant 62 per cent of providers saw the

subjectivity of pain as another barrier. On the patient side, 69 per cent of providers indicated that their elderly patients are simply reluctant to take opioids to treat pain.

The research points to the need for specific algorithms and decision trees to assist providers and patients on when to utilize opioids and speaks to the lack of research in this area relative to senior adults. One other interesting concept that really goes back to an ethical dilemma involves the potential concern that patient pain being adequately alleviated is dependent upon having a reliable caregiver. Thus the implication is that if one does not have a reliable caregiver one would be likely to do without opioid treatment which may be effective for pain. But, if one has a reliable caregiver one is more likely to receive adequate pain relief. Eight of the physicians struggled with the overall frustration in treating pain, recognizing the importance of it, but not always sure exactly how to do it.

The limitations to this study presented by the researchers involved group dynamics, the population sample consisting of mainly whites and Latinos, the unknown factor related to the actual prescribing patterns of the providers, not formally calculating the inter-coder agreement, and the sample size in general from the five practices. Additionally, provider pain treatment attitudes in a highly urban area like New York City may not translate into other geographical or cultural sections of the United States, such as the Southeast or in rural populations.

Conclusion

This was an excellent study giving readers insight into provider attitudes and beliefs surrounding prescribing patterns of opioids in senior adults. It highlights the ethical obligation that providers have to treat pain in their patients. It provided candid information regarding provider reluctance to prescribe based primarily upon caregiver issues as opposed to addiction or dependence issues with the patient. The article did not address the overall merit of opioids as effective treatment for non-cancer pain. In fact the study indicated that research is lacking in this area. Instead the study focused on provider mindsets. If research can show the effectiveness of opioids in the senior

population, barring caregiver issues, providers seem willing to use them as a treatment.

Reference

Spitz, A, Moore, AA, Papaleontiou, M, Granieri, E, Turner, BJ, & Reid, MC. (2011). Primary care providers' perspective on prescribing opioids to older adults with chronic non-cancer pain: A qualitative study. *BMC Geriatrics* 11:35.

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