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Older People Need Dental Care Too

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ABSTRACT

The characteristics of our society are changing dramatically. Not only are we living longer but the older generations are keeping their natural teeth longer and quite often all of their lives. Some of these older individuals have special difficulty keeping their oral health. The most common problem arises because of physical or intellectual deterioration, which makes it more difficult to clean the teeth and eat a healthy diet. This in itself can make chewing and eating uncomfortable, and this further aggravates the problem. Older people are more likely to wear dentures, and particularly complete dentures. Many of the older generation became denture wearers 30 or more years ago, when removing all the teeth in a single operation was a popular form of treatment. As we get older, the gums shrink progressively so that dentures become loose and ill-fitting over time. Elderly people are less likely to ask for new dentures than younger people, and often struggle on with badly fitting and worn ones. Ageing of the population is one of the most important demographic facts that came to the foreground in the 21st century. There are also associations between oral health, general health and well being of older people. This review is aimed to highlight the oral health needs of older adults and describes the general dental problems of elderly population.

Key Words: Ageing, Oral problems, Geriatric care.

Oral health is an important and often overlooked component of an older person's general health and well-being. At a time when more frequent professional care is necessary the elderly don't have the funds for periodontal therapy, fillings, crowns, root canal treatment, bridges and dentures. Still, the problem is not so much that the elderly require substantially different dental care than the younger adult population but that they lack the means and access to obtain it. Oral health problems can cause pain and suffering as well as difficulty in speaking, chewing, and swallowing. These problems can also be a complication of certain medications used to treat systemic diseases. There are also associations between oral health and general health and well-being. For, e.g., the loss of self-esteem is associated with loss of teeth[3] and untreated disease (caries and periodontal diseases) as well as the economic burden of dental care due to the paucity of dental insurance programs for the elderly. Although oral health problems are not usually associated with low life expectancy and death but oral cancers result in nearly 8,000 deaths each year, and more than half of these deaths occur among persons 65 years of age and older. (Davis *et al.*, 2000) The aim of this paper is to highlight the oral health needs of older adults using data from several national surveys, and describes the general dental problems of elderly population.

How Oral Health Affects Quality of Life in Elderly

Oral health problems can hinder a person's ability to be free of pain and discomfort to maintain a satisfying and nutritious diet, and to enjoy interpersonal relationships and a positive self-image. Overall, oral health problems are more frequently found in an older adult population for whom other health problems are often a priority.

Oral Pain

Oral pain is a sign of an advanced problem in a tooth or in the gingival (gum) disease. Although pain may dissipate with time, professional attention is needed to effectively manage the affected tooth tissue. National data indicate that 7 per cent of adults 65 years and older reported having tooth pain at least twice during the past 6 months. Older adults who have to low level of education were more likely to report dental pain than older adults who are better educated.

Older men and older women showed no difference in their likelihood of reporting tooth pain. (Vargas, *et al.*, 2000).

Eating Difficulty

Oral health problems, whether from missing teeth, generalized attrition, ill-fitting dentures, cavities, gum disease, or any infection, can cause difficulty in eating and can force people to adjust the quality, consistency, and balance of their diet, e.g., edentulous people tend to eat fewer raw vegetables, salads, and fresh fruits than people who have their own natural teeth. To date, however, available data do not show that these changes result in a diet of poor nutritional quality (Krall, *et al.*, 1998).

Edentulism (Total Tooth Loss)

Edentulism can have obvious negative esthetic and functional (speech, chewing/eating) consequences. In 1993, one-third of non institutionalized adults 65 years of age and older reported having lost all their natural teeth. Although there was no difference in the proportion of men and women who had lost all of their teeth, there were large differences in the prevalence of edentulism by socioeconomic status. Persons with family incomes below the poverty line were almost twice as likely to be edentulous against persons with family incomes at or above the poverty line. Similarly, edentulism was higher among black persons than among white persons. In 1995–97, 52 per cent of nursing home residents 75 years of age and older were edentulous (Kramarow *et al.*, 1999).

Dental Prostheses

Also, the oral health status in older people population has been addressed increasingly in the past years, but the oral health of institutionalized older people and underprivileged populations continue to be a neglected. Studies have been reported from the United States, Australia, Canada, India, Italy, Greece, Croatia, Fiji Islands, Hong Kong and Singapore, indicating that the dental status of institutionalized older people is generally poor.(Gaiao *et al*., 2009) Very few studies have been conducted in India, regarding the oral health status and not much documented data for prosthetic status data are available. Some studies have suggested that elderly population have poor

prosthetic status and high unmet prosthetic needs in India. Quality dental prostheses can help persons who have lost some or all of their natural teeth improve their quality of life by restoring loss of function and esthetics.

Medicational Problems

Asthma, hypertension, diabetes, etc., are prevalent common diseses among older adults, many take multiple prescriptions and over-the-counter medications. It is not unusual for these medications to have a side effect that is detrimental to their oral health. For, e.g., antihistamines, diuretics, antipsychotics, and antidepressants can reduce salivary flow. This can result in dry mouth (xerostomia), one of the most common side effects of both prescription and over-the-counter medications. Having a dry mouth can cause difficulty in chewing, speaking, and swallowing. It also increases the risk of developing dental caries and soft tissue problems. Dry mouth may also decrease the ability to wear dentures.

Oral Health Problems in Elderly

Dental caries: Dental caries, the most common multifactorial infectious disease of the teeth, represent another physiological burden, especially important for those whose systems are already weakened by diseases and aging. Adults 65 years of age and older with natural teeth continue to have untreated dental cavities in either the crown or the root of their teeth. Decay untreated by a dentist usually gets worse, resulting in pain and the potential loss of teeth. Dental caries is one of the main causes of tooth loss for both young and old adults. Although the prevalence of dental caries has declined in advance countries, overall, declines have not occurred among the most socially disadvantaged groups of older adults

Periodontal diseases: Periodontal diseases (gum diseases) are infections of the supporting structures of the teeth. When not treated, periodontal diseases can result in tooth mobility and tooth loss. The prevalence of periodontal diseases increases with age, from 6 per cent among persons 25–34 years to 41 per cent among those 65 years and older.(Brown *et al*., 1996) This increase is not necessarily due to older persons being more susceptible to periodontal diseases, but rather to

the consequences of these diseases (i.e., bone loss, pockets and gingival recession), which accumulate over time and are thus more evident in the elderly (Page, 1984). Preventing periodontal diseases is particularly relevant because recent studies have shown a possible association between these diseases and diabetes and cardiovascular diseases, which are major causes of death among the adult population. (N.I.H., 2000)

Oral cancer: Oral cancer is a heterogeneous group of cancers arising from different parts of the oral cavity, with different predisposing factors, prevalence, and treatment outcomes. It is the sixth most common cancer reported globally with an annual incidence of over 3,00,000 cases, of which 62 per cent arise in developing countries. Oral cancer, which includes the buccal mucosa, tongue, lip, and pharynx is of particular concern for persons 65 years of age and older because they are 7 times more likely to be diagnosed with oral cancer than persons under 65 years of age (Ries, *et al*., 2000). There is a significant difference in the incidence of oral cancer in different regions of the world. The age-adjusted rates of oral cancer vary from over 20 per 1,00,000 population in India, to 10 per 1,00,000 in the UK, and less than 2 per 1,00,000 in the Middle East (Shamkarnarayan, 1998) In comparison with the UK population, where oral cavity cancer represents only about 3 per cent of malignancies, it accounts for over 30 per cent of all cancers in India. The variation in incidence and pattern of oral cancer is due to regional differences in the prevalence of risk factors. But as oral cancer has well-defined risk factors, these may be modified – giving real hope for primary prevention. Dental Insurance: Dental insurance is an important predictor of dental care utilization (Isman & Isman 1997). Because dental insurance is usually acquired as part of a job benefit package, most persons lose their dental insurance coverage when they retire. In some states, Medicaid provides limited coverage for routine dental care for low income and disabled elderly persons. Medicare, on the other hand, does not cover routine dental care for older adults, but provides a few, very limited services considered to be "medically necessary." The importance of third party coverage is highlighted by the fact that older adults with dental insurance are 2.5 times more likely to make regular dental visits, significantly more likely to be dentate, with more natural teeth remaining,

and to hold more favorable oral health beliefs (Adegbembo *et al*., 2002). These findings suggest that providing older adults with dental insurance (whether this is private coverage or Medicaid) may serve as an enabler of dental service utilization. This will become even more important as more and more people keep their natural teeth into advanced old age. Even the availability of supplemental medical insurance (Medigap) increases one's chances of using dental services, presumably because the older person can divert some of the savings from their medical care to their out-of-pocket dental expenses. The 1993 Medicare Current Beneficiary Survey (MCBS) revealed that older adults covered by Medicare spent $310 per year on dental care and prescriptions, compared with $585 spent by those who had Medigap insurance (Gross *et al*., 1999).

Future for the Oral Health of Olders

The trend in improved oral health status among persons 65 years of age and older is expected to continue as the new cohorts of older persons continue to be better educated, more affluent, and more likely to keep their natural teeth (Clemencia, 2001). This positive change in oral health status shows that oral diseases and tooth loss are not inevitable with aging, and that teeth can be expected to last in good condition for all of a person's life. However, the fact that the coming generations of elderly are maintaining their teeth poses a challenge for satisfying their dental care needs. As more people tend to up-keep their teeth, there will be more at risk for dental diseases and will need more preventive, restorative, and periodontal services. Unfortunately, financing dental care for older persons is particularly difficult compared with other age groups, in part, because there are no Federal or State dental insurance programmes that cover routine dental services. Consequently, dental care is unreachable for many older persons living on a fixed income. Yet adequate oral health care is important for all older adults, as it is for other age groups. Another challenge is in providing dental care for older persons residing in rural areas because their care is often more complex than dental care for younger adults. This complexity comes from the many changes associated with ageing. Considering that caries and periodontal

diseases, the most common oral health problems, are cumulative, older persons often endure the consequences of their oral health experience from earlier years, such as missing teeth, large fillings, and the loss of tooth support. The elderly may also have multiple physical and psychological ailments that affect their treatment and require the dentist to have good medical knowledge and management skills. Furthermore, there is noticeable social inequality in the oral health of older adults. Older persons who live below the poverty line were almost 3 times as likely to report unmet dental needs as those who live at or above the poverty line (11 and 4%, respectively) (Cohen *et al*., 1997)

One additional challenge to caring for older persons is that the actual number of practicing dentists and the proportion of dentists relative to the population are expected to decline. The decline in the dentist-to-population ratio will particularly affect the elderly because they are the fastest growing segment of the population and because their special needs will require specialized dental skills. Optimally, the elderly should receive care from specialists in geriatric dentistry or general dentists with a good understanding of the medical, pharmacologic, and cognitive changes associated with the older adult population.

Elderly Population Need More Oral Health Care

Millions of elderly people across the globe are not getting the oral health care they needed because governments are not aware enough of the problem. By 2025, there will 1,200 million people aged 65 years. Failure to address oral health needs today could develop into a costly problem tomorrow. Oral disease is the fourth most expensive ailment to treat in most industrialized countries, according to WHO's World Oral Health Report 2003. "Unless we take action today, many countries will not be able to pay for treatment programmes," said Dr Paul Erik Petersen, head of WHO's Oral Health Programme, with regard to oral health need of the elderly (WHO, 2005).

Barriers for Olders

There is a widespread belief among community health providers and elders themselves that they would be more likely to use dental

services if the clinics were located nearby, or delivered directly via mobile units, or were less costly. Indeed, surveys of community-dwelling older adults in the 1980s reported that respondents wanted dental treatment but had difficulty climbing stairs and could not find dentists with ground floor offices (Smith & Sheiham, 1980) or that mobility problems prevented up to 30 per cent of elders from obtaining dental services (Hoad-Reddick, 1987).

Conclusion

Oral health is an important and often overlooked component of an older person's general health and well-being. Health promotion has become an important means of improving older adults' behaviors in a variety of areas, including exercise, weight loss, management of diabetes, and hypertension. Unfortunately, it has received less attention in dentistry. With the rapid advances in materials and methods for home-based oral hygiene and materials and techniques in dental practice, it is important to educate the general population on an ongoing basis. Clinical programs should take place through dental colleges by performing necessary dental care procedures for older patients. This could make oral health care accessible to more elders. There should be increasing numbers of Advanced Education in General Dentistry for graduated and post graduate dental students. These programmes could focus on providing dental care on door steps through satellite centres, mobile dental units to underserved populations, one of which would be low-income older adults. Another way to increase oral health care to older adults is through interdisciplinary training. Providing oral health training to physicians, nurse practitioners, nutritionists, and pharmacists in addition to dentists and hygienists would increase the frequency and amount of oral health information provided to elders. Finally, it would be beneficial to introduce the practice of good oral hygiene skills to the general public at an earlier age and provide better oral hygiene training to all age groups. With earlier education there should be a decrease in oral health problems among future cohorts of elders.

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Immunization Coverage with Selected Vaccines in Elderly Persons in A Rural Community in Southern India

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ABSTRACT

The paper aims to assess immunization coverage with selected vaccines among elderly residents of a rural area in Bangalore district, South India and to determine levels of awareness about immunization in the elderly population. An interview schedule was developed to collect information on socio-demographic profile, immunization coverage and awareness. All persons aged over 60 years in two villages of Bangalore district, Karnataka, India were interviewed using the schedule. Data were analyzed using proportions; associations were tested using chi-square test. It was found that none of the 215 elderly subjects reported ever receiving vaccinations for Influenza, Pneumococcus, Hepatitis A, Hepatitis B, and Varicella, which are among vaccines recommended for adults. A total of 19.5 per cent of the population reported ever having received vaccination for Tetanus, mostly consequent upon injury. We found a moderate level of immunization awareness among the study population, with females and the more educated being more aware and with the majority of those aware, feeling that vaccines are for children. Finally the results point to a need for a policy on immunization for the elderly in India.

Key Words: Elderly, Immunization coverage, Vaccines, Immunization awareness, Infectious disease.

The Indian elderly population is the second largest in the world at 76.6 million (Census of India 2001) This population is expected to grow and reach the 150 million mark by 2025 (UNO, 2009) The proportion of the Indian population in rural areas is 72.5 per cent, and the proportion of elderly persons in rural areas is higher, at 74.97 per cent. This translates to a huge number of elderly in rural India, with variable access to health care. India has a national immunization policy for children and pregnant women as part of its Reproductive and Child Health Programme. There is no official immunization policy for any of the other population groups including the adult and elderly population. Streptococcus pneumoniae is a major cause of invasive bacterial infections in the elderly and in groups at higher risk such as those with chronic heart and lung disease (Noakes *et al.*, 2006) Hospitalization rates for Influenza and pneumonia are high among the elderly. About 30 per cent of the population develops Herpes Zoster during their lifetimes, the risk increasing with age. In older or debilitated patients Herpes Zoster results in 50,000 to 60,000 hospitalizations annually in the United States (Zimmerman, *et al.*, 2007) These diseases are preventable using vaccines.

Some western countries have documented policies which recommend vaccines for adults, including the elderly. The United States Immunization policy outlined by the Centers for Disease Control and Prevention (CDC) recommends the use of vaccines against Influenza, Pneumococcus, Varicella, Herpes Zoster, Hepatits A and B and Tetanus for the adult population, including the elderly (UK 2009).

This study aimed at assessing immunization coverage with Influenza, Pneumococcus, Varicella, Herpes Zoster, Hepatits A and B and Tetanus vaccines in individuals over 60 years of age in a rural area in Anekal Taluk, Bangalore District, Karnataka, India. Awareness about immunization was also determined amongst this study population. The results of this study will help identify the need for an immunization policy for the elderly in India.

Materials and Methods

This was a cross sectional study carried out in the villages of Kugur and Kuthganahalli, Anekal Taluk, Bangalore District from July

to August 2009 by the Department of Community Health, St John's Medical College (SJMC), Bangalore. The population studied comprised of residents of these villages aged 60 years and above.

An interview schedule was designed to collect information, modified from an instrument of the Department of Health and Human Services, CDC, United States of America (UK, 2010) The schedule was divided into three subsections: socio-demographic profile, immunization status and immunization awareness. The socio-demographic section collected information on the subject's date of birth, sex, level of education, occupation and income status.

In the immunization status section, subjects were asked whether they had a record of ever being vaccinated against Tetanus, Hepatitis A, Hepatitis B, Influenza, Pneumococcus, Varicella and Herpes zoster. If no record was present, they were asked to report if they had ever received a vaccine. The awareness section ascertained information on basic awareness and their opinion on who they thought needed immunization. The schedule was face validated by circulation to experts in the field, and translated into the local language. All data collectors were trained on the administration of the schedule.

Ethical approval for the study was obtained from the Institutional Ethical Review Board, St. John's Medical College. Consent was obtained from every subject. A pilot study was carried out in a non-study area to pretest the schedule and was subsequently suitably modified.

Data collection was carried out by visiting each house in the two villages and identifying those persons aged 60 years and above residing in the village over the past year or more. Those persons who were not present at the time of data collection despite making three visits, those who were acutely ill and those not willing to sign the consent form were excluded from the study.

All the data collected were transferred to a Microsoft Excel spreadsheet and analyzed using a standard statistical package. The outcomes were the levels of coverage with specific vaccines presented as percentages, immunization levels cross tabulated with basic demographic variables to study possible associations, percentages of

persons aware about immunization and possible associations of awareness levels with gender and education.

Results

A. Socio-demographic Characteristics

The total population of Kugur and Kuthganahalli was 1862 of which 236 (12.67%) were over the age of 60. Out of these 236 people, 215 individuals finally participated in the study. Sex ratio was found to be 1,216 females per 1,000 males. (Table 1)

Table 1
Socio-demographic Characteristics of the Study Population

Socio-demographic Markers	*Males n = 97 (%)*	*Females n = 118 (%)*	*Total n = 215 (%)*
Age Distribution (years)			
60–69 (%)	51 (43.97)	65 (56.03)	116 (54)
70–79 (%)	34 (50)	34 (50)	68 (31.6)
> = 80 (%)	12 (38.71)	19 (61.29)	31 (14.4)
Highest Education Attained			
No Schooling	38 (39.1)	100 (84.7)	138 (64.3)
Primary School	27 (27.8)	5 (4.2)	32 (14.9)
Middle School	14 (14.4)	10 (8.5)	24 (11.2)
High School	17 (17.5)	3 (2.5)	20 (9.3)
Graduation	1 (1)	0	1 (0.5)
Occupation			
Not currently employed	22 (22.7)	63 (53.4)	85 (40)
Agriculture	48 (49.5)	21 (17.8)	69 (32)
Daily wage labor	14 (14.4)	13 (11)	27 (12.5)
Animal rearing	9 (9.3)	11 (9.3)	20 (9.2)
Petty Shop	3 (3.1)	4 (3.4)	7 (3.3)
Other	1 (1.03)	6 (5.1)	7 (3.26)
Financial Dependence			
Dependent	54 (55.7)	82 (69.5)	136 (63.3)
Not Dependent	43 (44.3)	36 (30.5)	79 (36.7)

B. Immunization Coverage

None of the elderly studied had a record of receiving or reported having ever received vaccinations for Hepatitis A, Hepatitis B, Influenza, Pneumococcus, Varicella and Herpes zoster. A total of 19.5 per cent of the study population stated that they had ever received at least one dose of tetanus vaccination (Table 2). A higher proportion of males (n= 29, 29.9%) reported having received Tetanus Toxoid as compared to females (n = 13, 11%). This difference was statistically significant $p < 0.001$. The proportion of persons who stated having ever received a vaccine against Tetanus was significantly higher in the 60–69 years age group. Trauma was the most common reason for receiving a tetanus vaccine (90.5%). (Tables 3 and 4)

Table 2
Immunization Status

Vaccines	*Immunized (%)*		
	Males (%)	*Females (%)*	*Total (%)*
Immunized	29 (29.9)	13 (11)	42 (19.5)
Not Immunized	68 (70.1)	105 (89)	173 (80.5)
Total	97 (45.12)	118 (54.88)	215 (100)

Table 3
Tetanus Immunization Status and Age Group

Age Group (yrs)	*Tetanus Received (%)*	*Tetanus Not Received (%)*	*Total*
60–69 years	29 (25)	87 (75)	116 (54)
70–79 years	8 (11.8)	60 (88.2)	68 (31.6)*
>80 years	5 (16.1)	26 (83.9)	31 (14.4)*
Total	42 (19.5)	173 (80.5)	215 (100)

* Amalgamated for the Chi square test, Chi square = 4.79; df = 1; $p < 0.05$.

Table 4
Reasons for Tetanus Vaccination

	Males (%)	*Females (%)*	*Total (%)*
Not Immunized	68 (70.10)	105 (88.98)	173 (80.46)
Reason for Immunization			
Trauma	27 (27.83)	11 (9.32)	38 (17.68)
Dog Bite	0 (0)	2 (1.69)	2 (0.93)
Preoperative	2 (2.07)	0 (0)	2 (0.93)
Total	97 (100)	118 (100)	215 (100)

C. Awareness Regarding Immunization

Basic awareness regarding immunization was present in 127 (59.1%) of the 215 elderly persons studied. More female elderly were aware about immunization (62.7%) than males (54.6%) but this difference was not statistically significant.

A significantly higher proportion of elderly persons who had received some form of formal education were aware about immunization (72.7%) compared with those who had not received any formal education (51.5%) (Table 5). Also, when asked about who should be immunized, 96.1 per cent of the elderly who were aware of immunization felt that children should be immunized. Also 34.6 per cent of the elderly felt that the elderly should be immunized. (Table 6)

Table 5
Immunization Awareness and Education

Education Status	*Aware (%)*	*Not Aware (%)*	*Total (%)*
Illiterate	71 (51.5)	67 (48.5)	138 (64.2)
Formal Education received	56 (72.7)	21 (27.3)	77 (35.2)
Total	127 (59.1)	88 (40.9)	215 (100)

Chi square = 9.26, df = 1, $p < 0.05$

Table 6
Immunization Awareness Regarding "Who Should be Vaccinated?"

Group	*Yes (%)*	*No/Don't Know (%)*	*Total (%)*
Children	122 (96.1)	5 (3.9)	127
Adult	35 (27.6)	92 (72.4)	127
Pregnant women	58 (45.7)	69 (54.3)	127
Elderly	44 (34.6)	83 (65.4)	127

Discussion

This study was based in a rural area close to the city of Bangalore. The proportion of population that is over 60 years of age in rural areas in India is estimated at being 8.9 per cent which is lower than the proportion found in this study (12.7%). This could be due to migration among the younger age groups since the study area is close to a city, the majority were female and between the age of 60–69 years. Most of the population had received no formal education and were not currently gainfully employed. Amongst t were employed, agriculture was the predominant occupation. Most of them stated that they were dependent on others for all or a part of their income. Other studies conducted elsewhere also reported similar findings (Joshi, *et al.*, 2003, Ingle and Nath, 2008).

The present study found that the level of immunization coverage in persons 60 years and over in this part of rural Karnataka was low.

None of the elderly persons studied recalled having ever received any of the recommended vaccines and only 19.5 per cent recalled having ever received a tetanus vaccine.

Amongst those who recalled receiving a Tetanus vaccine, trauma was cited as the main reason for receiving the vaccine and males were more likely to be vaccinated than females, possibly because males are more likely to be victims of trauma or because males have better access to health care. The study also found that a greater number of young old had been vaccinated against tetanus than the older age groups, which could be due to a recall bias; younger subjects are likely to remember better. A higher prevalence of tetanus immunization

amongst males and a lesser prevalence with age have been reported in other studies done elsewhere (Yost, 1988, Modlin, *et al.*, 2000). Immunization and vaccination has been one of the most beneficial and cost effective interventions in the prevention of acute and chronic infectious diseases (Roush & Murphy 2007, McIntyre, *et al.*, 1997–1998). Given this fact, many countries have a government sponsored immunization policy for their paediatric, obstetric, and elderly populations. India has a national immunization policy for its paediatric and obstetric population but not for its elderly population. Data on vaccination coverage in India amongst the elderly is scarce; however other countries have investigated coverage levels.

An Italian study in persons over 65 years found coverage levels of 24 per cent with tetanus toxoid, 64 per cent with influenza vaccine, and 5 per cent with pneumococcal vaccine (Sammarco, *et al.*, 2004) A study conducted in the United States found 40% coverage levels for persons over 65 years with tetanus toxoid, 66 per cent with influenza vaccine, and 46 per cent with pneumococcal vaccine (Modlin, 2000) These higher coverage levels found in other countries may reflect the national immunization policies set in place for their elderly populations.

The majority were aware about immunization with females being more aware than males. This may be a reflection on the national immunization policy in India for its pediatric and obstetric population in which females are predominantly involved. When awareness was compared with the level of education, the more formally educated elderly were more aware about immunization. However, only a small proportion of the study population believed that the elderly should be immunized. Once again, this could be linked to the absence of any official immunization policy aimed at adults in India compared to its paediatric population.

India has a vaccination policy and a programme in place for its paediatric population since the 1970s and hence data on vaccination coverage in infants is more widely available. However, the National family health survey (NFHS) found that the overall immunization coverage among children between 12–23 months of age in India was

just 44 per cent. This figure points to the enormity of the task, if vaccination among the elderly were to be considered as part of national policy.

The significance of preventable infectious diseases should not be underestimated. In rural India, infectious diseases were found to be the 3rd leading cause of death in the elderly (census of India 2001) There are 1.5 million clinical cases annually of hepatitis A worldwide with almost all adults living in developing countries having serological evidence of past infection (WHO 2000). For hepatitis B there is an estimated prevalence of 2–7 per cent in India (Sathiyasekaran & Sankaranarayanan, 2004) Influenza prevalence data in India is scarce but in one study serological evaluations for antibodies against influenza virus strains were reviewed in different age groups and at least one strain was identified in 93 per cent of individuals over 45 years, which was higher than in any other age group suggesting progressively increasing infection and exposure with age (Mathews, 2001)

Data on the prevalence of pneumococcal disease in India amongst the elderly is once again scarce but it has been estimated that S. pneumonia causes 6.6–22 million episodes of pneumonia and 200,000 deaths yearly, according to the Committee on Immunization, Indian Academy of Pediatrics.

Conclusion

It can be concluded from the present study that immunization coverage amongst an elderly population in rural Karnataka was low. Basic awareness regarding immunization was moderate, but among those with basic awareness, a large proportion of the elderly did not believe that they needed to be vaccinated. These findings reflect the lack of an official immunization programme designed for elderly in India. Given the burden of infectious diseases amongst the elderly in India and the ability to prevent them through vaccines, an immunization policy for the elderly should be considered in the country.

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Risk Factors for Depressive Symptoms Among Elderly Malays Living in Rural North Malaysia

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ABSTRACT

The objective of the study was to determine the risk factors for depressive symptoms among the elderly Malays living in rural north Malaysia. This case control study was conducted in 22 villages located in a north-western state in Malaysia called Kedah. The Geriatric Depression Scale was used to determine whether the respondents had depressive symptoms. Cases and controls were matched for race where 113 elderly Malays with depressive symptoms were taken as cases and another 113 elderly Malays with no depressive symptoms were used as controls. Univariate factors which were found to be significantly associated with depressive symptoms among this group of elderly participants included being unemployed (OR 1.43 .95%, CI 1.09; 1.86), earning less than or equal to RM 600 (OR 2.05 .95%, CI 1.15; 3.67), unmarried (OR 2.47 .95%, CI 1.25; 4.89) and living alone (OR 1.49 .95%, CI 1.13; 1.97). Multivariate logistic regression showed only income of less than or equal to RM 600 (OR 2.21 .95%, CI 1.21; 4.03) as a

significant predictor. Elderly with lower income need to earn fair wages. Governmental and non-governmental agencies should consider this and provide ample employment opportunities for the elderly who wish to work.

Key Words: Depression, Aged, Rural population, Malaysia.

It is estimated that in the near future the population of the elderly in the world will increase by about 21 per cent (Venne, 2005) and in the Western Pacific region the figure will double (WHO, 2005). The population of Malaysia is 25 million and is made up of several ethnic groups, comprising mostly of Malays (Rabieyah & Hajar, 2003). It is estimated that by the year 2020, Malaysia will have almost 10 per cent of its population aged 60 and above (Department of statistics, 1998).

Depression in a broad sense can describe a syndrome that includes a constellation of physiological, affective and cognitive manifestations. Depression may range in severity from mild symptoms to more severe forms that include delusional thinking, excessive somatic concern and suicidal ideation over long periods of time (NIH, 1991).

The World Health Organization (WHO) estimates that depression will be a major burden of illness in most developing countries (Murray & Lopez, 1996). In central Malaysia the prevalence of depression has been shown to range from almost 8 per cent in rural communities (Sherina *et al.*, 2004) to 6 per cent in urban communities (Sherina *et al.*, 2005). In northwest Malaysia, where the population of the elderly is one of the highest, studies have shown the prevalence of depression among the elderly in the community to be as high as 48.4 per cent (Rashid *et al.*, 2006) and in an elderly care institution to be about 67 per cent (AlJawad *et al.*, 2007).

Although depression is the most common psychiatric problem among the elderly, they are not at a higher risk of developing depression (Robert *et al.*, 1997). However, untreated depression in the elderly has significant clinical and social implications. Depression decreases an individual's quality of life, increases dependence on others, causes functional impairment, imposes an immense burden on communities and health services, and can even lead to suicides (O'Connel *et al.*, 2004). The reason for misdiagnosis and under treatment of depressive disorders in the elderly could be due to the

misconception by health care providers and the patients themselves that depressive symptoms are a part of the ageing process (Sherina *et al.,* 2003; Lebowitz 1997 *et al.*). Another reason could be because depression in the elderly usually does not manifest the usual symptoms which would normally occur in younger individuals, thus leading to misdiagnosis and under treatment.

Studies have linked depression to marital status, education, income, place of residence (Sherina *et al.*, 2003), past traumatic and stressful experience, family history, loneliness (Savikko *et al.*, 2005), chronic illness (Sherina *et al.*, 2005) and functional ability (Wada *et al.*, 2009).

The objective of this study was to determine the risk factors for depressive symptoms among the elderly Malays residing in the rural northwest state of Kedah in Malaysia.

Methodology

Setting: This study was conducted in 22 villages located in a northwest state in Malaysia named Kedah which has one of the highest rates of older adult population in the country.

Sampling: Participants were from among the 418 elderly Malay residents of these 22 villages who were ages 60 and older. A total of 372 consenting elderly Malays who were not cognitively impaired and were able to communicate effectively participated. Those 113 who had depressive symptoms according to the screening tool used were taken as cases. The 113 controls were randomly recruited from among the 259 villagers without depressive symptoms.

Study Design: The data for this Case Control study was collected from September 2008 to September 2009. The data was collected by 32 fourth year medical students who were trained by the researcher in the class rooms as well as in the field to collect the data to reduce the possibility of bias. Cases were defined as Malays who were = 60 years of age and who had depressive symptoms following a screening test. Controls were Malays who were = 60 years of age with no depressive symptoms. Cases and controls were matched for race.

Instruments: The data was collected by trained research assistants in the participant's homes. Besides the baseline demographic

information, the Geriatric Depression Scale (GDS) was used to determine whether the participants had depressive symptoms. The GDS is a questionnaire widely used worldwide as a screening tool for depression in the elderly (Yesage *et al.*, 1983). The participants were asked to respond to 30 questions by answering 'yes' or 'no' in reference to how they felt on the day the questionnaire was administered. Scores of 0–9 indicated normal, 10–19 mild depression and 20–30 indicated severe depression. The GDS was found to have 92 per cent sensitivity and 89 per cent specificity when evaluated against formal interview diagnostic criteria (Ibid.). The validated Malay (Teh Hasanah 2004) version was used in this study.

Barthel index (Mahoney and Barthel, 1965) which is a well-established and commonly used nursing tool was used to assess the functional independence in the activities of daily living (ADL) of the participants. The participants were categorized as independent and dependent according to this index.

Body Mass Index (BMI) was categorised as <18.5 underweight, 18.5–24.9 as normal, 25–29.9 overweight and = 30 obese. Blood pressure was measured using standardized methods. RM 600 was used to categorise poverty level because at the time of the study the income of below RM 600 was used by the government as the poverty cut off level.

Analysis: Analysis was done using SPSS version 13. The variables were compared as appropriate with either the Pearson chi-square test or the Fisher's exact test. Also, univariate and binary logistic regression analyses were conducted with reporting of odds ratios to estimate risk for depressive symptoms.

Ethics: The research received the approval of the institutional research and ethics committee before commencing. All respondents were asked to give an informed written consent before starting the interview. The anonymity of the participants is assured.

Results

Descriptive

Table 1 shows the comparisons between the depressive cases and normal controls. A significantly greater percentage of those with depressive symptoms were unmarried, unemployed and were earning less than or equal to RM 600 (USD 187) per month.

Table 1
Risk Analysis for Depressive Symptoms

Variable	*Depressive Symptoms (113) n (%)*	*Normal (113) n (%)*	*χ2/P Value*	*OR (95% CI)*
Sex				
Female	67 (59.3)	64 (56.6)	0.16/0.686	
Male	46 (40.7)	49 (43.4)		
Age				
60–70	71 (45.2)	86 (54.8)	5.21/0.074	
71–80	31 (58.5)	22 (41.5)		
> 80	11 (9.7)	5 (3.7)		
Marital status				
Unmarried *	31 (67.4)	15 (32.6)	6.99/ < 0.001	2.47 (1.25; 4.89)
Married	82 (45.6)	98 (54.4)		
Employment status				
Unemployed *	65 (57.5)	45 (39.8)	7.08/ < 0.001	1.43 (1.09; 1.86)
Employed	48 (42.5)	68 (60.2)		
Income				
= RM 600 *	87 (55.4)	70 (44.6)	6.03/0.023	2.05 (1.15; 3.67)
> RM 600	26 (37.7)	43 (62.3)		
Living arrangement				
Alone *	21 (18.6)	9 (8.0)	5.53/0.011	1.49 (1.13; 1.97)
Family	92 (81.4)	104 (92)		
Disability			0.13/1.000	
Dependent	4 (3.5)	4 (3.5)		
Independent	109 (96.5)	109 (96.5)		
BMI				
Malnutrition	54 (47.8)	54 (47.8)	0.018/1.000	
Normal	59 (52.2)	59 (52.2)		
Hypertension				
Yes	55 (48.7)	46 (40.7)	1.45/0.229	
No	58 (51.3)	67 (59.3)		

* Significant.

Univariate Odds Ratios

As shown in Table 1, there were significant odds ratios for depressive symptoms with the highest odds of more than two-fold for those unmarried. There was also two-fold odds for earning less than or equal to RM 600 per month. Unemployment and living alone had significant odds ratios too. The differences in sex, age, disability, BMI and hypertension were not statistically significant.

Multivariate Odds Ratios

As shown in Table 2, a binary logistic regression was attempted using marital status, employment status, income and living arrangement as predictor variables. Income (OR 2.21. 95% CI 1.21; 4.03) was found to be a significant predictor variable. The model had–2 likehood ratio of 305.493, Cox and Snell R squared 0.034 and Nagelkerke R square 0.045.

Table 2
Multivariate Logistic Regression for Depressive Symptoms

Risk Factors	*Regression Coefficient*	*Standard Error*	*Wald*	*p Value*	*Adjusted Odd Ratio*	*95 % CI*
Marital status Unmarried Married	0.003	0.348	0.000	0.993	1.00	0.51; 1.99
Employment status Unoccupied						
Male	–0.183	0.289	0.401	0.526	0.83	0.47; 1.47
Income *= RM 600 > RM 600	0.794	0.306	6.718	0.010	2.21	1.21; 4.03
Living arrangement Alone Family	0.459	0.397	1.336	0.248	1.58	0.73; 3.44

* Significant.

Discussion

Depression in the aging and the aged is a major health problem. Marriage has been shown to be a protective factor against depression among the elderly (Baldwin *et al.*, 2002). It is assumed that married people are exposed to lesser stressful experiences throughout their married life and thus decrease the risk of being depressed. Studies in

Brazil have shown that depression can occur in the elderly who are born in rural areas and who are not married (Blay & Holmes, 2007) and in the elderly who have lost their spouses (Winrow *et al.*, 2005). Similarly in Taiwan elderly widows were shown to be at higher risk of being depressed (Chen *et al.*, 2001). In this study, those who were unmarried were about twice at risk of having depressive symptoms as compared to those who were married. Other studies conducted in health clinics (Sherina *et al.*, 2003; Imran *et al.*, 2009) in Malaysia also found higher risks of depression among those unmarried.

An important challenge to successful aging is the ability to maintain control over life's events, especially as people experience a variety of losses. Older adults who live alone or in residential homes are more susceptible to loneliness (Lebowitz *et al.*, 1997). Having family members who care for their elderly have been found to be a protective factor against depression (Imran *et al.*, 2009). Most elderly in Asia live with family members (WHO, 2004). Studies conducted in China, Hong Kong, Thailand and Sri Lanka have shown the lack of social support especially from family members as an important risk factor for depression (Chen *et al.*, 2005; Chi & Choi, 2001; Knodel & Chayonan, 1997; Malhotra *et al.*, 2010) In the present study and other studies conducted in rural parts of Malaysia (Izzuna *et al.*, 2006) and in two local hospitals (Salimah *et al.*, 2008) showed those who were living alone were at a higher risk of having depressive symptoms as compared to those living with their families.

Employment and economic status plays an important role in determining the state of health of a person (WHO, 2004). Occupation helps improve one's self esteem and make an individual feel like an important member of the community (Fabian, 1992). Occupation is closely related to the economic status of an individual and people with low income have been shown to have depressive symptoms (Blay *et al.*, 2007). Studies among South East Asian refugees in Canada (Beisser & Hou, 2001) and among elderly in Sri Lanka (Malhotra *et al.*, 2010) and Hong Kong (Wong *et al.*, 2008) showed that unemployment as an important risk factor for depression.

Low economic status has also been shown to be an impediment to receiving healthcare (Miranda *et al.*, 2003). Malaysia's progress in poverty eradication has been remarkable. By 2002, only about five per

cent of households were poor (UNDP, 2005). Despite this, the economic status of the elderly is still lagging. This could be because of the difficulty in finding jobs with fair wages suitable to them in rural Malaysia. In this study those who were unemployed and those with low income were at a higher risk of having depressive symptoms as compared with those employed. Other studies conducted in clinical settings in Malaysia also found similar findings (Sherina *et al.*, 2003; Chen *et al.*, 2001).

Multivariate analysis was attempted to look at the pattern of relationship between variables which were found to be statistically significant during univariate analysis. In combination it was found that only income of less than RM 600 was a significant predictor indicating the importance of income among elderly who are living in rural areas.

Limitation and Strengths

This study has several limitations. The villages chosen for this study were based on their proximity to the place of employment of the main author and thus the population may not truly represent the actual elderly population in north Malaysia. The GDS used for this study is a screening tool and is not appropriate to be used as a diagnostic tool for depression. As the authors were interested in the influence of living arrangement, marital status, employment and income as potential risk factors, many other variables which have been linked to depression were not studied. However, because there is a dearth of studies conducted on depression among the elderly who live in the rural areas, this study provides insight into the important role of income as a risk factor of depression.

Conclusion

In this study, income was shown to be an important risk factor for depression among the elderly. The elderly who live alone need to earn a reasonable income. Unfortunately it is more difficult for the elderly to be employed and to earn a reasonable wage, especially in villages. Governmental and non-governmental agencies should consider this and provide opportunities for employment for those elderly who wish to work.

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Magnitude and Determinants of Economic Dependency Among Older People in India

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ABSTRACT

The present study examines the magnitude and determinants of economic dependency among older persons in India. The study was done using raw data collected by the National Sample Survey Organization (NSSO) on 'Morbidity, Health Care and Conditions of the Aged', 2004. The national representative sample consisted of 34,229 elderly persons aged 60 years and above (males, 51.1%, rural, 63.8%). Economic dependence was evaluated based on subjective assessment by the participant. Multivariate logistic regression analyses were done to find out the association between economic dependence and several socio-demographic variables. Economic dependence was reported by 66 per cent, of the elderly in India. Elderly males were seven times (OR 7.03, 95% CI 7.02–7.04), illiterate people were nearly two times (OR 1.65, CI 1.65–1.66), rural elderly were 1.12 times and elderly having any morbidity were 1.19 times more likely to be economically dependent compared to their counterparts. Economic dependence increased with advance in age. Positive perception about health status of elderly negatively affects their economic dependence. Unhealthy elderly, measured on subjective well-being, were more than three times (OR 3.59 CI 3.58–3.61) and physically immobile

elderly were more than two times (OR 2.54 95% CI 2.54–2.55) more likely to be economically dependent compared to their counterparts. The economic burden of the country is likely to increase due to the increasing proportion of elderly. Future measures in this direction need to be targeted on the elderly population focusing on women, those who are unhealthy, immobile, rural residents and illiterates.

Key Words: Elderly, India, Economic, Dependency.

Elderly support ratio, as the number of working-age people ages 15 to 64 divided by the number of persons 65 or older, in India is 13 in 2010 which would decreased to 5 in 2050. The same change in the world as a whole is from 9 to 4 (PRB, 2010). This decline in provider support ratio to one third is a matter of concern in the economic security of the elderly in India. Old age dependency ratio, defined as ratio of population above 60 years of age to the population in working ages (15–59 years), is 13.2 in India, which is projected to increase to more than double (33.9) in 2050 (UN, 2008). However compared to other South Asian countries like Bangladesh, Pakistan and Nepal India shows a comparatively lower economic dependency among elderly (ILO, 2008). Three in every five elderly men in India continue to work in old age because of poverty and insufficient income security (Rajan, 2005). At the same time high economic and social security (Rajan, *et al.,* 1999) is seen among dependent elderly in India.

Ageing of population increases economic dependence and it acts as a major determinant of economic development. The size of the old age population and the speed of population ageing varies across regions. Europe has the highest proportion of people aged 65 and older (16%), and the older population is growing fastest in several countries in East and Southeast Asia (PRB, 2006). According to Census 2001, proportion of older population (age 60+ years) in India was 7.5 per cent (RGI, 2001).

Rajan in 2006 reported that 69.4 per cent of older people in India was economically dependent. However limited studies were looked

into the determinants of economic dependency of old age population in India. A study by Bhagat and Unisa in 2006 studied the dependency of older people in India with comparison of adult and child dependency. The present study examines the magnitude and determinants of economic dependency of elderly in India.

Methods

The study is based on raw data collected by the National Sample Survey Organization (NSSO) during its 60th round survey on 'Morbidity, Health Care and the Conditions of the Aged' conducted between January to June 2004 (NSSO, 2006). A national representative sample of 34,229 (males, 50.1%, rural, 75.7%) older persons aged 60 years and above in India was used for analysis. The author evaluated the economic dependence based on subjective assessment by the participants. In the survey the state of economic dependence was assessed by given options as 'not depend on others', 'partially depend on others' and 'fully depend on others'. The present study considered partially or fully economic dependent elderly as 'economic dependents'. Weighted data were analyzed using SPSS (Version 17.0; SPSS Inc., Chicago, IL, USA). Logistic regression analysis was done to find out the predictor of economic dependency. A p value of < 0.001 was considered statistically significant.

Results

Economic independence was reported by 34 per cent, partial dependence by 13 per cent and full dependence by 53 per cent of the older people (60+) in India. Among the major states in India, Kerala showed the highest level of economic dependency among older people (75.7%) followed by Haryana (73.4%), Orissa (71.9%) and Rajasthan (71.1%). Table 1 presents the economic dependency of older people in India by sex and spatial variation and Table 2 detailed the state wise economic dependency in India.

Table 1
Economic Dependency Among Older People in India

Degree of Economic Dependence	*Rural*			*Urban*			*Total*		
	Males	*Females*	*Total*	*Males*	*Females*	*Total*	*Males*	*Females*	*Total*
Not dependent	52.0	14.1	33.2	56.1	17.3	36.3	53.0	14.9	34.0
Partially dependent	15.5	12.6	14.1	13.5	9.7	11.5	15.0	11.9	13.4
Fully dependent	32.5	73.2	52.7	30.4	73.1	52.2	32.0	73.2	52.6
Number of elderly	11,327	15,021	21,848	6,149	6,232	12,381	17,476	16,753	34,229

Table 2
Statewise Variation of Economic Dependence of Older People in India

States	*Economic Status*			
	Not Dependent on Others a	*Partially Dependent on Others b*	*Fully Dependent on Others c*	*Depend on Others b+c*
India	34.0	13.4	52.6	66
North				
Delhi	37.6	10.7	51.6	62.3
Haryana	26.6	37.4	36.0	73.4
Himachal Pradesh	39.2	16.6	44.2	60.8
Jammu & Kashmir	43.0	11.5	45.5	57
Punjab	29.5	16.0	54.5	70.5
Rajasthan	28.9	13.1	58.0	71.1
Uttaranchal	50.8	5.3	43.9	49.2
Central				
Chhattisgarh	38.6	11.0	50.4	61.4
Madhya Pradesh	38.1	11.2	50.7	61.9
Uttar Pradesh	37.4	9.2	53.4	62.6
East				
Bihar	39.6	13.7	46.7	60.4

Cont'd...

Cont'd...

Jharkhand	38.5	14.5	47.1	61.6
Orissa	28.1	16.7	55.2	71.9
West Bengal	32.1	12.2	55.7	67.9
Northeast				
Arunachal Pradesh	27.6	47.4	25.0	72.4
Assam	32.0	16.3	51.7	68
Manipur	25.1	33.3	41.7	75
Meghalaya	41.2	20.5	38.4	58.9
Mizoram	43.2	22.4	34.4	56.8
Nagaland	52.2	31.9	15.9	47.8
Sikkim	40.0	20.4	39.6	60
Tripura	32.0	13.2	54.9	68.1
West				
Goa	42.1	18.1	39.7	57.8
Gujarat	31.2	11.6	57.1	68.7
Maharashta	33.6	14.2	52.1	66.3
South				
Andhra Pradesh	33.4	10.9	55.7	66.6
Karnataka	35.0	11.5	53.5	65
Kerala	24.3	18.8	56.9	75.7
Tamil Nadu	34.5	15.1	50.4	65.5

Majority of the study samples were rural residents (63.8%) with almost equal sex distribution (males 51.1%). Sixty per cent of them were currently married, 38.2 per cent widows, 1.1 per cent never married and 0.4 per cent divorced or separated. Around 61 per cent of the elderly were illiterates. Most of the sample population living with spouse and other members (47.3%), without spouse but with children (32.6%), living with spouse only (11.4%), living alone (4.4%) and with other relatives (3.9%) and others (0.4%). One fourth (24.8%) of the elderly perceived their present health as poor. Majority of the elderly in India were physically mobile (90.5%).

Bivariate and multivariate analysis results were presented in Table 3. The fitted logistic regression model predicted the demographic, social and health characteristics of the older people on

economic dependence. Females, people with better perceived health, immobile, higher age group, illiterates, people having any morbidity and rural residents were significantly more likely to be economically dependent compared to their counterparts. Never married were nearly three times, currently married were nearly two times and widows were 48 per cent more likely to be economically dependent compared to the elderly age who were separated or divorced.

Table 3

Determinants of Economic Dependence of Older People in India: Results of Bivariate and Multivariate Logistic Regression Analysis

Variables	*Economically Dependent1*		*Total (N)2*
	Percentage	*OR(CI)*	
Demographic			
Residence			
Urban	63.7	Reference	12381(36.2)
Rural	66.8	1.12(1.11–1.12)*	21848(63.8)
Sex			
Male	47.0	Reference	17476(51.1)
Female	85.1	7.03(7.02–7.04)*	16753(48.9)
Age Group			
60–64	56.3	Reference	12260(35.8)
65–69	65.0	1.44(1.44–1.45)*	9887(28.9)
70–74	73.8	2.26(2.25–2.26)*	6409(18.7)
75–79	76.9	2.86(2.85–2.86)*	2734(8.0)
80+	84.3	3.77(3.76–3.78)*	2939(8.6)
Marital Status			
Divorce/Separated	60.2	Reference	146(0.4)
Never married	63.0	2.93(2.90–2.97)*	393(1.1)
Currently married	56.6	1.82(1.80–1.84)*	20599(60.2)
Widow	80.4	1.48(1.47–1.50)*	13092(38.2)
Literacy Status			
Literates	50.9	Reference	13290(38.8)
Illiterates	74.8	1.65(1.65–1.66)*	20927(61.2)

Cont'd...

Cont'd...

Social and Health			
Living Arrangement			
Living alone	47.1	Reference	1506(4.4)
Living with spouse only	43.6	1.75(1.74–1.76)*	3872(11.4)
With spouse and other members	59.7	4.80(4.78–4.82)*	16120(47.3)
Without spouse but with children	85.4	8.74(8.72–8.77)*	11122(32.6)
Other relatives	76.6	4.15(4.13–4.16)*	1318(3.9)
No-relatives	51.7	1.25(1.24–1.26)*	146(0.4)
Own perception about health			
Excellent/Very good	41.3	Reference	1827(5.5)
Good	63.0	1.90(1.90–1.91)*	23119(69.7)
Poor	81.8	3.59(3.58–3.61)*	8210(24.8)
Physical Mobility			
Mobile	64.0	Reference	30803(90.5)
Immobile	90.0	2.54(2.54–2.55)*	3222(9.5)
Morbidity Status			
No morbidity	61.9	Reference	20204(59.0)
Have any morbidity	72.4	1.19(1.18–1.19)*	14025(41.0)

* $p < 0.001$, [1] For weighted samples [2] Un weighted Sample size.

Discussion

From early times onwards inadequate financial resource were evidenced as one of the main problems of old age in India (Desai, 1985). Among the states in India, Kerala with the highest proportion of older people showed highest economic dependency. As reported earlier (Kaur & Agrawal 1987), our results showed an increase in economic dependency with increase in age. In corroboration to earlier study results (Dak and Sarma, 1987), the present study also shows higher economic dependence among older women compared to their male counterparts. Widows showed the highest level of economic dependency in India similar to that seen in Haryana (Singh *et al.*, 1987). Majority of the older people in India live with their spouse or

with children or relatives. Living with spouse act as a greater economic security to older people in India.

The finding of more than half of the older people as fully dependent act as a barrier to shape their lives by meeting their own needs as well as their caretakers. Economic growth is likely to be affected more in future because of the increasing proportion of older persons in the country. This economic burden on the country is also likely to increase with the need for more social security measures for older persons. However, social security measures targeted on the older population focusing on those who are unhealthy, unemployed, women, rural residents and illiterates are felt necessary.

More than the economic dependency, the old age people indirectly contribute to the economic security of the families by informal work, which helps the other members of the family to participate in economic activities. In conclusion the need to evaluate the modifiable determinants of economic dependency among older people in India such as literacy, physical mobility, morbidity and living arrangement are to be strengthened. Collective efforts should be needed for the enhancement towards economic independence of the older people by adopting unique approaches. Dependent elderly persons who are members of a club, those who often meet their friends and relatives and those who often talk with their neighbours declare a higher satisfaction level than the rest (ENEPRI, 2005). So a different pattern of demand of the older people in the country will have to be incorporated to the existing social security system. It is difficult for a low income country like India to meet the all the economic needs of increasing elderly population. More than a matter of income, economic dependency acts as security for their living. And economic condition of the elderly is almost a reflection of the economic behavior of their entire adult life. So a social integration for the well-being of dependent elderly to the current social measures in the country is felt vital.

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Ageing and Security: Savings and Transfers Behaviour of Indian Households

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ABSTRACT

The demographic dividend in India is soon going to be dominated by the rising ageing population and the security of the elderly people has become a major challenge. With poor formal security mechanisms, the Indian households have to contend with their own designs of security. The economic burden in old age necessitates sizeable savings by the households for dis-savings in the old age. However, the phenomenon of continuing and increasing savings even in the old age has raised the issue of motivations for savings. The economics literature suggests that intergenerational transfers as a possible alternative motive for savings and wealth accumulation. This paper analyses such motivation for savings by the elderly and the extent of intergenerational transfers among urban Indian households. The findings suggest that apart from financial savings, households also save and transfer substantially in the forms of physical and human capital. There also exist two way transfers – from parents to children in the form of wealth transfers and form children to parents in the form of parental care and support. Overall the results suggest that the elderly people are benefit from this form of intergenerational transfers and living arrangements and are happy and satisfied.

Key Words: Ageing, Security, Savings, Transfers, Life satisfaction.

Adequate income support at older ages is a matter of primary concern for those who wish to ensure some degree of independence; absence of a sufficient and reliable income reduces the elderly to varying degrees of dependence. The most vulnerable are those who have no productive assets, little or no savings or investments, no pensions or retirement funds, and either have no family to care for them or who are part of families with low or uncertain incomes. For the majority of workers in less developed regions who are in the unorganised, small scale and informal sector in urban areas, or in agriculture and allied sectors in rural areas, the absence of pension schemes, provident fund or other suitable savings instruments, the lack of information and foresight with regard to problems of older ages, the irregular flow of income during their working lives and the constant pressures to meet current needs guarantee a high degree of dependence on their children.

For many of the elderly, particularly in less developed regions, the greatest issue is poverty. The issue is more acute for women, not only because of their progressive predominance numerically with age, but also because women are disadvantaged in the predominantly patriarchal societies in which most of them live. It is when they become old that the consequences of gender roles (men as 'breadwinners', women as 'housekeepers' even in instances where they have been economically active) are explicitly revealed. In situations where pension schemes accrue mainly to employees, women who have not worked for most of their adult lives become even more heavily reliant on their husbands' status and pensions. The large numbers of women who are single, widowed or divorced are especially vulnerable, receiving few or none of the entitlements of men and in some instances even lacking comparable status in the community and the family. The proportions of married older people owning their own houses can be quite high but ownership among women living alone tends to be much lower. Women living alone include those who may once have owned their homes with their husbands, but whose customs of inheritance dictate partial or total forfeiture to children, or sale of the home to share out the inheritance or to cover imposition of death duties. Even in circumstances where the elderly continue to own their own homes, shrinking incomes and deteriorating lifestyles may make maintenance of the

housing stock impossible and the seeking of more appropriate alternatives impractical – a state of affairs which is likely to be more acute for women than for men.

Given these perspectives on the aged, this paper examines the household arrangements for security and their dimensions. Noting that savings in working age and dissavings in the old age are the main sources of security, the motivations for savings and the consequent dissavings pattern are examined. Since death is uncertain, any household that saves for dissaving in later period will have to bequeath the accumulated assets to the next generation. This establishes the intergenerational transfers mechanisms in which the households may also have a motivation to save more just to leave a bigger estate. Hence, the transfers aspects of household relations are also examined in this paper. Finally, the overall satisfaction of life has been elicited throwing light on the intergenerational living arrangements of the elderly.

The Theoretical Approaches to Savings and Transfers

Conventionally in the economics tradition, the savings behaviour has been analysed using the Life-Cycle hypothesis of Modigliani, in which individual saves for retirement. The individual dissaves the accumulated savings during his lifetime for consumption purposes (Modigliani and Brumberg, 1954; Ando and Modigliani, 1963). However, three empirical observations challenge this hypothesis. One is the finding that individuals continue to save and accumulate wealth even after retirements is at odds with the life-cycle model. At least the individual is not depleting the savings during retirement. The recent evidences also show a strong bequest motive operating for such savings behaviour. The second finding is that the individual's savings is not entirely dependent on the sole purpose of retirement consumption. There are other aspects like altruism, dependency, social support, strategic behaviour, and need for holding assets. The third aspect is the uncertain death. As the timing of death is uncertain, an individual cannot deplete savings to zero at the time of death. In fact, a positive amount is always left at death. Now the question is whether such left over is accidental or intended. As is well known, the unconsumed wealth of the diseased passes to the next generation as inheritance. With the strong bequest motive this wealth could signify the presence

of intended accumulation and this could be used to extract old age support services from the children.

The research on savings and dissaving of elderly is deemed as main evidence on the transfer motive on the household behaviour. Mirer (1979) and Menchik and David (1983) show that the wealth holdings of elderly households tend to increase with age. This behaviour is quiet contrary to the simple life-cycle theory of Modigliani and Brumberg (1954) which predicts that people save during their working years and dissave in old age. While the studies by Hurd (1987, 1989) based on US panel data appear to support the life-cycle theory, the panel study by Alessie, *et al.* (1999) show that large number of elderly households continue to accumulate wealth even if the average household decumulates wealth.

Some explanations given by elderly households as against the predictions of the life-cycle theory are uncertainty about the date of one's death (Davies, 1981), and the risk of high unplanned medical expenditures or the desire for social status (Borsch-Supan and Stahl, 1991; Borsch-Supan, 1992), Davies (1981) and Hubbard *et al.,* (1995) observed that zero transfer life-cycle models with life time uncertainty or uncertainty about future income and health expenditures show that low dissaving rates in old age are still compatible with a life-cycle model without bequest motive. Kurz (1985) observed heterogeneous nature of savings behaviour with elderly households. Therefore, it is impossible to identify an operative bequest motive from the savings behaviour of elderly households, particularly with the presence of precautionary savings motive as the co-existing motive.

The other important motive in conventional analysis has been that of precautionary motive. Households save in order to meet exigencies and uncertain income shocks. In general, households whose employment is at risk always save sufficient amount in their life in order to safeguard such uncertainty. Friedman (1957) argues that unstable income needs a large reserve in case of meeting any emergencies like health and job loss, which leads to substantial savings. Leland (1968) also point out that large savings is necessary to a labour who faces uncertain income opportunities. The direct test on precautionary savings behaviour has been conducted by Zeldes (1989), Kimball and Mankiw (1989) and Kimball (1990) in which income

uncertainty effects have been differenced from wealth effects. However, Guiso *et al.* (1992) argue that uncertainty has unimportant effects on the consumer's behaviour where uncertainty has been constructed with household's self-reported measures. Dynan (1993) finds that precautionary motive cannot explain a significant fraction of savings when uncertainty is measured by the variance of consumption growth.

The third motive for larger savings and accumulation of wealth has been that of bequest motive. According to Kotlikoff (1988), intergenerational transfers from parents to adult children involve as much as 80 per cent of total assets in the US of which about 50 per cent are in the form of inter vivos. As regards to parent-to-child transfers, two explanations are found by Cox and Rank (1992). One is that parental transfers are quid-pro-quos (exchange motive) for services provided by children. The second is that the parents transfer to children to relieve them of liquidity constraints and help them smooth consumption over their lifetime. The exchange motive implies that the transfer amount should increase with the amount of filial services and that children's income may be positively correlated with the parental transfer amount if parent's demand for nonmarketable filial services, such as attention and companionship, which are very high in quality and price of such services rises with children's income. Cox and Rank (1992) find that the amount of transfers from parents to children is positively correlated with children's income and the frequency of contacts, and the frequency of visits is negatively correlated with the geographical distance between the parents and the children. In the case of intended transfers from parents to relieve children of liquidity constrained, the transfer amount should be negatively related to the children transitory income but positively related to the permanent income. Bernheim, *et al.,* (1985) show that the frequency of contacts by children increases with the parent's bequeathable wealth. Cox (1987) finds empirical evidence that parental transfers are targeted toward liquidity-constrained children in the United States.

Intergenerational transfers can also be in the reverse direction. In the context of parental care by children, McGarry and Schoeni (1997) observed that 7.1 per cent of adult children make financial transfers to their parents. As for child-to-parent transfers, Lucas and Stark (1985)

show that parental wealth is positively correlated with the amount transfers from children. Another explanation for child-to-parent transfers referred by Johnson and Whitelaw (1974) is that adult children's transfers are repayment of implicit parental loans the children took for human-capital investment while they were young. This behaviour is considered as evidence for the repayment motive.

The Empirical Analysis

This paper utilises a household level data from urban Tamil Nadu to study the savings, dissaving and transfer behaviour of elderly in India. The data has been collected from two wards (wards 86 and 85) in the Chepauk division of Chennai Corporation, during September 2006 and September 2007. Using the random sampling method, 315 households were selected for the purpose of present study. The data set contains information relating to the income, consumption expenditure, savings and transfer pattern of the household, size of transfers, nature of transfers, living arrangements, and life satisfaction, besides the household demographic and socio-economic backgrounds. We start with the empirical results on the motivations for savings, followed by intergenerational transfers and end with an assessment of life satisfaction.

Generally, households save and accumulate assets for various purposes and for easy liquidity at times of crisis. The savings most often take the form of financial and physical savings. Households invest in financial instruments like deposits, insurance and equities. The physical form of savings takes the form of investments in durables and immovable properties. Motives for savings range from pure consumption purposes to housing, education and marriage of children and life satisfaction.

The motives for which households save have been grouped into categories and are presented in Table 1. Life-cycle motive is the desire to smooth one's consumption streams that arise from temporary imbalances between income and expenditures at various stages in the life cycle, which in turn are due to differences in timing between income and expenditure streams. The various mtives for life-cycle savings include one's leisure, retirement expenses, consumer durables, house purchase, children's education and marriage expenses. As can be

observed from Table 10, only 4.4 per cent of sample households prefer to save for leisure and peace of mind motives. Nearly 28.9 per cent of sample households save for the sake of children's welfare and higher education, while another 11.7 per cent of samples are motivated to save for children's marriage. And 25.7 per cent of sample households accumulate savings for the purpose of buying house and durable goods.

Table 1
Motives of Savings

Savings Motive	*Sample*	*Percent*
Peace of mind and leisure	14	4.4
Medical care and illness	39	12.4
Status and prestige	13	4.1
Uncertainty, risk and protection in the life	39	12.4
Help others	1	3.0
Children's welfare and higher education	91	28.9
Wealth accumulation – to buy flat, house and durable goods	81	25.7
Children's marriage	37	11.7
Total	315	100.0

Precautionary motive, defined as motives arising from uncertainties concerning future income, includes savings for one's own illness, accidents, unemployment and income fluctuations. Precautionary motive accounts for nearly 12.4 per cent of sample household savings. Another 12.4 per cent of sample households save primarily for uncertain job prospects and income fluctuations as protection motive in the study area. Savings for status and prestige motives are also observed for 4.1 per cent of households while about 3 per cent of sample households also have some altruistic concerns while saving. These findings suggest that the household behavior with regard to savings is better explained by the concern for children than the conventional life cycle motive or precautionary motive, strengthening the view that savings and hence wealth accumulation is mainly for intergenerational transfers.

Coming to the components of such savings, the sample households in this study choose mainly savings in the form of fixed assets. In the case of financial savings, usually some fixed proportion from their total monthly emoluments towards contributions to LIC policy, bank deposits, GPF, shares, chit fund, land and flats, and jewels. Expenditure on durable goods is also construed as savings in this study. Table 2 shows that savings in the form of plot and flat is very high (31.11%), followed by durable goods (15.51) and LIC policy (11.62). Bank deposits account for by 11.36 per cent and GPF form of savings account for 10.38 per cent of sample households. Given the various forms of savings, 41 per cent of sample households prefer the financial form, while another 40 per cent choose physical form of savings (primarily human capital investments and asset creation), the remaining are saving in other instruments.

Table 2
Forms of Savings

Form of Savings	*Proportion of Households*
Life insurance	11.62
Bank deposits	11.36
GPF	10.38
Shares	3.32
Chit fund	7.82
Plot and flat	31.11
Jewells	8.83
Durable goods	15.51
Total	100.0

Tables 3 and 4 present the amounts of savings, dissaving and transfers of elderly and non-elderly households in the sample area. From the tables, it is observed that elderly households continue to save in their old age also. It also observed that there are reasonable amounts of savings, and the elderly households save more than the non-elderly households. Compared to the savings of non-elderly households, the amount of savings by the elderly households is almost equal in financial form and about 50 per cent in physical form. The disavings is

mainly for health care and food expenditure. It is also important to note that the dissavings by the elderly households is comparatively less with that of non-elderly households. The elderly households also gift and bequeath to their children sizeable amounts. The amount of gift given by them is slightly higher whereas amount of bequest given is slightly lower than non-elderly households. The average amount of transfers for all households is presented in Table 5. From Table 5, it is observed that the households transfer, both by gift and by bequest, more than what they received as gift or bequest.

Table 3

Savings, Dissavings and Transfer Behaviour of Elderly Household

Nature	*Amount (Rs per month)*	
	Mean	*Standard Deviation*
Financial savings	3,659	3,380
Physical savings	887	1,962
Dissavings on health and medical care	1,784	684
Dissavings on food and other related expenditure	9,593	4,707
Gift given	49,500 (per annum)	
Bequest given	3,87,750 (per annum)	

Table 4

Savings, Dissavings and Transfer Behaviour of Non-Elderly

Nature	*Amount (Rs per month)*	
	Mean	*Standard Deviation*
Financial savings	4,002	3,323
Physical savings	1,562	3,132
Dissavings on health and medical Care	1,958	960
Dissavings on food and other related expenditure	11,661	5,901
Gift given	43,750 (per annum)	
Bequest given	4,06,915 (per annum)	

Table 5
Average Amount of Transfers – Gift and Bequest

Transfer	*Amount (Rs per annum)*
Gift received	Rs 41,794.81
Gift given	Rs 46,492.31
Bequest received	Rs 2,21,576.00
Bequest given	Rs 3,99,171.70

Tables 6 and 7 show the details regarding transfer of gifts and bequest among the sample households by total income of the households. It is observed that majority of samples in all the income categories engage in intergenerational transfers, both gift and bequest (received as well as given). However, majority of sample households in all income levels transfer mostly in physical form. This nature of transfer is very strong among the higher income households (above Rs 20,000).

Table 6
Household Income and Gift Transfers

Income of the Household	*Nature of Gift Received*			*Nature of Gift Given*		
	Financial Form	*Physical Form*	*Total*	*Financial Form*	*Physical Form*	*Total*
Up to Rs 10,000	–	21 (100)	21 (100)	–	3 (100)	3 (100)
Rs 10,001 to Rs 20,000	12 (18)	54 (82)	66 (100)	4 (31)	9 (69)	13 (100)
Rs 20,001 to Rs 35,000	23 (45)	28 (55)	51 (100)	5 (16)	26 (84)	31 (100)
Above Rs 35,001	8 (50)	8 (50)	16 (100)	6 (33)	12 (67)	18 (100)
Total	43	111	154	15	50	65

Note: Figures in parentheses indicate percentages.

Table 7
Household Income and Bequest Transfers

Income of the Household	*Nature of Bequest Received*			*Nature of Bequest Given*		
	Financial Form	*Physical Form*	*Total*	*Financial Form*	*Physical Form*	*Total*
Up to Rs 10,000	–	25 (100)	25 (100)	–	4 (100)	4 (100)
Rs 10,001 to Rs 20,000	7 (9)	70 (91)	77 (100)	1 (5)	18 (95)	19 (100)
Rs 20,001 to Rs 35,000	9 (11)	76 (89)	85 (100)	4 (8)	47 (92)	51 (100)
Above Rs 35,001	–	30 (100)	30 (100)	2 (8)	23 (92)	25 (100)
Total	16	201	217	7	92	99

Note: Figures in parentheses indicate percentages.

Table 8 presents the findings with regard to earnings of children and the amount of transfers. From the table, it is observed that the average income of the first child is Rs 10,838 and that of the second child is Rs 7,798. Gift and bequest received by first child and second child are Rs 12,896, Rs 1,14,324 and Rs 12,688, Rs 1,05,000 respectively. Though there are third child in some households, they are not earning as they are below the age of labour force participation and are either in schools or out of labour market.

Table 8
Child Earnings and Transfers Received

Child	*Monthly income*		*Gift*		*Bequest*	
	Average	*S.D.*	*Average*	*S.D.*	*Average*	*S.D.*
Child 1	10,838	12,099	12,896	23,733	1,14,324	1,48,486
Child 2	7,798	2,634	12,688	20,472	1,05,000	1,70,176

Voluntary transfers between parents and children is a major factor in the allocation of income and wealth which in turn influences household savings. Parents invest time and money in raising the welfare of their children. Children, on the other hand, not only

provide financial support for the aged parents, but also spend time and give care for the aged. Table 9 presents the nature of parental expectations from children. Majority expect food and medical support from children as these involve substantial spending. This is supported by the observation that 47 per cent of parents expect monetary support from children. Moreover, 80 per cent of parents expect these supports from their male children, in accordance with the patriarchal social setup of the Indian society.

Table 9
Parental Expectations From Children

Nature of Expectations by Parents From Children	*Number of Parents Expecting Support*
Food support	138 (44)
Medical support	104 (33)
Old age support	26 (8)
Expecting other needs of life	12 (4)
Support expected from sons	253 (80)
Support expected from daughters	8 (2)
Support expected form wife	10 (3)
Support expected from brothers	5 (2)
Support expected from others	4 (1)
Short expected support (1 to 3 years)	23 (7)
Long expected support (above 5 years)	94 (30)
Permanently expected support	163 (52)
Money support expected parents	149 (47)

Note: Figures in parentheses indicate percentages.

Table 10 shows the observed patterns of personal care given by children towards their parents in the sample area. For the purpose of ascertaining the behaviour of children towards parental care, only adult children with earnings are considered. Among the first two children, 184 children are providing parental support in the sample area. From Table 7, it is observed that 164 (89%) sample children providing equal attention to their parents. About 161 (88%) children are providing best care to their parents. Nearly 33 per cent of children

provide medical care to their parents. However, just 2 per cent of children are getting compensation for their parents care. Thus, it is observed that majority of children provide personal care and attention to their parents in the form of spending long hours with them, taking parents to temple, old age support and providing cash payment to the parents.

Table 10
Personal Care by Children to Parents

Nature of Care to Parents	*Number of Children Who Provide Care*
Personal attention to parents	43 (23)
Payment of cash to parents	37 (20)
Long hours spend with parents (above 5 hours)	19 (10)
Short hours spend with parents (1 to 3 hours)	4 (2)
Permanently stayed with parents	33 (18)
Occasionally stayed with parents	8 (4)
Medical care to parents	61 (33)
Taking parents to temples	45 (24)
Old age support to parents	38 (21)
Getting compensation for parents care	4 (2)
Living very close to parents	6 (3)
Providing best care to parents	161 (88)
Providing equal attention to parents	164 (89)

Note: Figures in parentheses indicate percentages.

In the reverse direction of intergenerational transfers, parents not only provide physical and financial transfers to children, but also provide time related services for their children even in their old age. Table 11 presents the details regarding services given by the parents towards their children. It is observed from table that majority of parents (93%) are providing time related services to their children. Time related services in the sample area also include timeliness of transfers. Transfers are used to relieve children from the financial problems who are having credit burden (early transfers or bequest to

solve the liquidity constrains faced by the children). It is further observed that majority of parents (98%) do not bargain with their children for transfer of wealth. In fact, it is clear from table that majority of parents (94%) are willing to transfer their assets early to children.

Table 11
Services to Children by Parents

Nature of Services by Parents	*Parental Willingness*	
	Yes	*No*
Time related services to children	294 (93)	21 (7)
Bargain with children for transfer of assets	06 (2)	309 (98)
Willing to postpone transfer to children	19 (6)	296 (94)

Note: Figures in parentheses indicate percentages.

The structure of co-residence in the sample area is presented in Table 12. There are 87 co-resident households in the sample area. Co-residents households consist of male (head), wife of head, grand-father, grand-mother, and all adult as well as minor children living together. The co-residence indicates living arrangements for the elderly and the strong intergenerational linkage among the households.

Table 12
Co-resident Households

Structure of Co-residence (Joint family)						
Male (Head of Household	*Female (Wife of Household)*	*Grand Father*	*Grand Mother*	*Child 1*	*Child 2*	*Child 3*
87 (28)	87 (28)	19 (83)	13 (87)	86 (28)	65 (29)	11 (32)

Note: Figures in parentheses indicate percentages.

Assessment of Quality of Life and Satisfaction by Households

Since the savings and transfers are considered as welfare improving, the sample respondents were also asked to assess their

overall quality of life and their life satisfaction. The results of such assessment are presented in Tabble–12. In assessing the quality of life, majority (57%) of households rated their life as "pretty happy". Another 27 per cent of households reported that "life is very happy", and marginal percentage (16%) households felt that their life is "not too happy". With regard to life satisfaction, 59 per cent of sample households expressed that they are "somewhat satisfied" and another 28 per cent of samples revealed that they are "highly satisfied". However, it seems that about 15 per cent of sample households were "not satisfied" in their life.

Table 13
Household Quality of Life and Satisfaction

Overall Quality of Life		*Satisfaction in Life*	
Indicator	*Respondents*	*Indicator*	*Respondents*
Very happy	85 (27)	Highly satisfied	89 (28)
Pretty happy	180 (57)	Somewhat satisfied	180 (59)
Not too happy	50 (16)	Not satisfied	46 (15)
Total	315 (100)	Total	315 (100)

Note: Figures in parentheses indicate percentages.

Conclusion

In the sample area, elderly households continue to save even in their old age, just as the non-elderly households. Even though, to some extent, the elderly households dissave for medical and consumption purposes, they transfer substantial amount of bequest to their children. It is observed from the sample that almost all households in the sample save, dissave and transfer. Therefore, savings for life cycle consumption may not be the sole motive for savings. Hence, it is the intergenerational transfers motive that dominates all other motives for wealth accumulation. Since transfers are between the generations, there also exist many motives for transfers like altruism, exchange and strategic behavior. It is observed from the empirical analysis that parents expect children to provide support in their old age and

children to reciprocate the parental transfers by providing personal care and attention to their parents in the form of old age support, financial support and time related services, including co-residence. Overall, it is observed that the majority of sample households are feeling that their overall quality of life as "happy" and they believe that they are living is a satisfactory life.

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Personality Differences Among the Institutionalized and Non-Institutionalized Aged

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ABSTRACT

The purpose of this study was to compare the five personality factors and six facets of personality of aged (N=120), sixty years and above, living in institutions or homes for the aged (N=60) and those who are living in their own homes (N=60). The tool used for this study was the NEO-FFI (Costa & McCrae, 1992). The findings show that Institutionalized aged got significantly higher scores on Neuroticism (t = 4.97, with d = .91 (p< .01), and Extraversion (t = 3.43, with d = .63, (p< .01). The scores were higher but not significantly different on Openness (t = .57, with d = .10 (p> .05), Agreeableness (t = 1.53, with d = .28 (p>.05), and Conscientiousness (t = .50, with d = .09 (p> .05) respectively, in comparison to non-institutionalized aged. Similarly, on six facets of personality the scores found significantly higher on Depression, Positive Emotions, and Anxiety, and slightly higher but not significant on Warmth, Altruism, and Impulsiveness, for institutionalized aged than non-institutionalized aged respectively.

Key Words: Ageing and Health, Personality and Health, Institutionalized aged, Personality and Mental Health, Non-Institutionalized aged.

Maiden *et al*. (2003) examined the role of personality in old aged women (mean age = 80 years) who were often confronted with major changes in their health, and life circumstances. The findings showed that neuroticism was found to be affected by decreased social support and increased unmet needs, less extraversion was found associated with poorer health and greater psychosocial needs, but openness trait found very stable and less affected by negative life events.

In an another study, extraversion was found positively correlated with greater social activity, perceived social support and increased likelihood of seeking social support in mid adulthood.

In a study, Roepke *et al.* (2001) compared neuroticism, extraversion, and openness of young-old (50–84) and old-old (85–100) persons. Results showed that personality profiles of both groups were similar, but the old-old group was lower on extraversion and on four of the 30 facets of extraversion trait (warmth, positive emotions, impulsiveness, and order) than the young-old group.

Terracciano *et al. (*2005) in their longitudinal study found gradual personality changes in adulthood, but neuroticism declined up to age of 80 but decline was found in openness, and increase in agreeableness and conscientiousness up to the age of 70. The researchers did not find any specific reasons for these changes. Therefore, they attributed these changes to genetic factors, disease, or life experiences.

In an another study, Igor and Mullet (2003), studied the changes of personality and age and results showed that conscientiousness score increased as age increase, but openness scores start decrease in the young age, but neuroticism scores were neither high nor low in middle age, old and very old age. In introversion, pattern of scores found increased in young age as well as in old age, finally, for agreeableness scores found much lower in the middle aged adults.

In a recent study, Roberts, *et al. (*2006) showed that in young adulthood around 20 to 40 year-old people showed more social dominance (which is a sub-facet of extraversion), conscientiousness, and emotional stability. During adolescence, people manifested greater 'social vitality' (another facet of extraversion) and openness as compared to old age. The Agreeableness factor was seen to change only in old age.

Objectives of the Study

1. To study the differences and similarities in personality traits of institutionalized and Non-Institutionalized aged.

The present study focuses on the differences in the personality profiles of aged people who have been institutionalized, and aged people living with their families (non-institutionalized). Getting an understanding of these differences may help in understanding problems of aged in both setting and settling the issue of institutionalization v/s family-care/Non-institutionalization for geriatrics, and the advantages and disadvantages of the same.

Hypotheses

1. Neuroticism scores are higher in Institutionalized aged than Non-Institutionalized aged.
2. Openness to experience, Agreeableness, and Consciousnesses scores are lower in Institutionalized aged than Non-Institutionalized aged.
3. Depression, Anxiety, and Impulsiveness scores are higher in Institutionalized aged than Non-Institutionalized aged.
4. Warmth and Positive Emotions scores are higher in Non-Institutionalized aged than Institutionalized aged.

Method

Sample

The sample for this study consisted of 120 educated subjects aged 60 years and above, living in an institutions (pay and stay homes, N=60) and 60 elderly were those who were non-institutionalized (individuals who were living with at least one family member other than their spouses).

Tools

1. NEO-FFI (McCrae and Costa, 1992)

This scale was developed by McCrae and Costa (1992). It consists of five scales, containing twelve items each. Thus there are a total of sixty items in this test, which measure five domains, namely,

Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C). The individual has to respond to each item on a five-point scale, "Strongly Disagree", "Disagree", "Neutral", "Agree", and "Strongly Agree." This test may be administered either individually or in a group. There is no time limit for this test but most respondents usually take about 10 to 15 minutes to complete it but older respondents and those with limited reading skills take much longer. The individual's scores show the degree to which each of the five personality dimensions is present within that particular individual. The reliability coefficient (alpha) for the domain scales range from .86 to .95. The internal consistencies for the individual facet scales ranged from .56 to .81 in self-reports, and from .60 to .90 in observer ratings. The reliability coefficient (alpha) for domain scales range from .86 to .95. The convergent and discriminate validity is high on all facets.

2. NEO-PI-R (Costa & McCrae, 1989)

The NEO-PI-R on the other hand is a 240 item questionnaire, which measures the five domains and the six sub facets of each domain. There are 30 facets all told and each facet is measured by eight items each. The reliabilities and validities of all the sub tests are highly significant. For this study the facets used were *N1 – Anxiety; N3 – Depression; N5 – Impulsiveness; E1 – Warmth; E6 – Positive Emotions; and A3 – Altruism.*

Procedure

For the institutionalized aged, the permission was taken from the various homes across the city. The test was administered individually to each respondent. Those that were able to fill in the form without any help were free to do so. However, a majority required help and so the items were read out to them and they responded with their appropriate choice which was then marked by the researcher. For the Non-Institutionalized aged group, participants were contacted individually at their residences. Their responses were recorded by the researcher wherever the aged could not do so independently.

Results

The data collected from the 120 aged participants were analyzed through the SPSS version 11.0.

A t-test was carried out to find out the significance of difference, if any, between Institutionalized aged and Non-Institutionalized aged on five personality factors and six facets of personality.

Table 1

Shows Means, Standard Deviation and T-Test Result for Institutionalized (N=60) and Non-Institutionalized Residents (N = 60).

Variable	*Type of Residence*	*Mean*	*SD*	*Cohen's D*	*T*	*Significance Level*
N	Institutionalized	26.20	9.47	.91	4.97	.000**
	Non-institutionalized	17.90	8.81			
E	Institutionalized	27.45	5.59	.63	3.43	.001**
	Non-Institutionalized	31.37	6.86			
O	Institutionalized	26.60	7.58	.10	.57	.571(ns)
	Non-Institutionalized	27.35	6.87			
A	Institutionalized	30.37	5.41	.28	1.53	.129(ns)
	Non-Institutionalized	28.83	5.59			
C	Institutionalized	36.78	6.67	.09	.49	.621(ns)
	Non-Institutionalized	36.22	5.85			
DEP	Institutionalized	21.55	6.78	1.42	7.70	.000**
	Non-Institutionalized	12.38	6.25			
WARM	Institutionalized	24.13	5.34	.09	.45	.643(ns)
	Non-institutionalized	24.57	4.87			
P.E.	Institutionalized	20.95	6.41	.41	2.24	.027*
	Non-Institutionalized	23.37	5.35			
ANX	Institutionalized	21.23	6.66	.96	5.22	.000**
	Non-Institutionalized	14.75	6.95			
IMP	institutionalized	11.62	5.34	.16	.91	.363(ns)
	Non-institution	12.48	5.06			

** P < .01 significance level, *p < .05 significance level, (NS) not significant.

A t-test was carried out to see if Institutionalized and Non-Institutionalized aged differ significantly on five personality factors and facets. Table 1 shows the mean and standard deviation for Institutionalized and Non-Institutionalized aged on five personality factors and facets. The means for Institutionalized aged on neuroticism were 26.20, σ = 9.47, and for Non-Institutionalized aged 17.90, σ = 8.81, and t-value was 4.97 ($p < .01$) respectively, with d = .91. The results indicate that on Neuroticism, Institutionalized aged score significantly higher than Non-institutionalized aged. Thus the hypothesis stating "Neuroticism scores are higher in Institutionalized aged than Non-Institutionalized aged" was accepted.

On openness means for Institutionalized aged were 26.60, σ = 7.58, and for Non-Institutionalized aged 27.35, and σ = 6.87, and t value was 5.68 (NS), respectively, with d = .10. On agreeableness means for Institutionalized and Non-Institutionalized aged were 30.37, σ = 5.41, and 28.83, σ =5.59, and t-value was 1.53(NS), respectively, with d = .28. In the Agreeableness category, institutionalized aged did score higher than their non-institutionalized counterparts. The means for Institutionalized aged on conscientiousness were 36.78, σ = 6.67, and for Non-Institutionalized aged 36.22, σ = 5.85, and t-value was .495(NS), with d = .09.

In Openness category, the non-institutionalized aged did score slightly higher than the institutionalized aged; however the difference was not significant; however, there was not a very significant difference, on conscientiousness institutionalized aged had a slightly higher score than the non institutionalized group. However, since the difference was not significant, the second hypothesis 'Openness to experience, Agreeableness, and Consciousnesses scores are lower in Institutionalized aged than Non-Institutionalized aged' was partially accepted.

Means for Institutionalized aged on depression was 21.55, σ = 6.78, and for Non-Institutionalized aged 12.83, σ = 6.52, and the t value was 7.70, with d = 1.42, ($p < .01$). Means for Institutionalized aged on anxiety was 21.23, σ = 6.66, and for Non-Institutionalized aged 14.75, σ = 6.95, and the t-value was 5.22, with d = .96, ($p < .01$),

and on Impulsiveness means for Institutionalized aged was 11.62, σ = 5.34, and for Non-Institutionalized aged 12.48, σ = 5.06, and the t-value was .91, with d = .16, (P > .05) (NS), respectively. The institutionalized aged showed a much higher level of depression and anxiety than their non-institutionalized counterparts, as far as Impulsivity was concerned, the non-institutionalized group scored higher than the institutionalized group but not to a significant degree, thus the hypothesis stating that "Depression, Anxiety, and Impulsiveness scores are higher in Institutionalized aged than Non-Institutionalized aged" was partially accepted.

Means for Institutionalized aged on warmth was 24.13, σ = 5.34, and for Non-Institutionalized aged 24.57, σ = 4.87, and the t value was .46, with d = .09, (P > .05, NS), and means for Institutionalized and Non-Institutionalized aged on positive emotions was 20.95, σ = 6.41, and 23.37, σ = 5.35, and the t-value was 2.24, with d = .41, (p < .01.), respectively. According to results, the Warmth facet score was slightly higher but not significant, but Positive Emotions scores found higher and significant in the non-institutionalized group than the institutionalized group, so the hypothesis stating that "Warmth and Positive Emotions scores are higher in Non-Institutionalized aged than Institutionalized aged" was partially accepted.

Discussion

As Table 1 indicated that institutionalized aged scored significantly higher on neuroticism than non-institutionalized aged, the first hypothesis 'Neuroticism scores are higher in Institutionalized aged than Non-Institutionalized aged' was accepted. Earlier research also supported the present findings to some extent, where

Ron (2004) showed that males and females, both living in institutions, reported high feeling of hopelessness, helplessness, and depression compared to community living elderly. In another study, Mhaske (2008) compared five personality factors, (NEO-FFI) among institutionalized aged, and result found that institutionalized aged were higher on neuroticism in compare with other four factors, namely, extraversion, openness, agreeableness, and conscientiousness.

As results showed that on openness the non-institutionalized aged did score slightly higher than the institutionalized aged; however the difference was not significant, on agreeableness institutionalized aged did score higher than their non-institutionalized counterparts but difference is not very significant, and on conscientiousness category institutionalized aged had a slightly higher score than the non institutionalized group. However, since the difference was not significant, therefore, the second hypothesis "Openness to experience, Agreeableness, and Consciousnesses scores are lower in Institutionalized aged than Non-Institutionalized aged" was rejected.

According to present findings, institutional aged is no different on openness, agreeableness, and consciousness factors than their counterpart. Some studies show contradictory results. In one study, openness, agreeableness and consciousness factors found higher among institutionalized male than female (Mhaske, 2009). Some another studies of personality (Neugarten, 1973; Slater & Scarr, 1964) stated that the fundamental pattern of personality set in earlier life, and becomes more set with advancing age, some recent studies also support this idea, Costa and McCrae, (1994) have used Five-Factor Model of personality to analyze data from longitudinal and cross-sectional studies, result found that personality seems quite stable over time.

As a result Table 1 indicated that institutionalized aged scored significantly higher on depression and anxiety than non-institutionalized aged, but on impulsivity the non-institutionalized group scored higher than the institutionalized group but not to a significant degree, thus the hypothesis stating that "Depression, Anxiety, and Impulsiveness scores are higher in Institutionalized aged than Non-Institutionalized aged" was partially accepted. Present findings are similar with previous studies in some extend. As Chadhha (1994) found that non-institutionalized elderly were lower on depression as compared to institutionalized elderly. A recent longitudinal study (Anstey *et al.*, 2007) evaluated incidence of depression in community and residential care homes for the aged. The study found 32 per cent depression in residential care home elderly as compared to only 14 per cent depression in community dwellers.

In another study, Arvaniti *et al.* (2005) found that prevalence rate of depression and suicidal ideation was higher in institutionalized elderly compared to non-institutionalized aged. Sleeping problems, anxiety and depression were also found higher in institutionalized elderly (Holmquist *et al.*, 2005). In another study, Shamoian (1991) found that depression and anxiety are most prevalent psychological problems in old age, and anxiety often coexists with depression, but it is very difficult to determine in old age.

As result showed that non-institutionalized aged were slightly higher but not significant on warmth facet than institutionalized aged, but positive emotions score was found higher and significant in the non-institutionalized aged than the institutionalized group, so the last hypothesis stating that "Warmth and Positive Emotions scores are higher in Non-Institutionalized aged than Institutionalized aged" was partially accepted. As McCrae and Costa (1992) explained that warmth and positive emotions are facets of extraversion, and in the present study extraversion was also found higher in non-institutionalized ($M = 31.37$, $SD = 5.59$) aged than institutionalized aged ($M = 27.45$, $SD = 6.86$, with t value was 3.43, ($P < .01$). Roepke *et al.* (2001) found personality profiles of old-old group (85–100 years old) were lower on extraversion and on four of the 30 facets of extraversion trait (warmth, positive emotions, impulsiveness, and order) than the young-old group (50–84 years) and this finding is similar with present study.

Conclusion

The findings of this study will help in the planning of sensitization training to adults who are willing to stay in old age homes and will help the elderly in preparation for a productive aging for elderly because it is associated with personality of the individual to some extend. The study will also help to develop some counselling programme for institutionalized aged.

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Quality of Informal Care received by Elderly in Tiruchirappalli

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ABSTRACT

The purpose of this paper is to examine the concept of informal care among elderly. Population ageing is a global phenomenon. Though it is commonly agreed that caring for an increasing older population is the responsibility of the government, the private sector and individuals themselves, it is till assumed the families should take up the major role in caring for the elderly. India is poised to become home to the second largest member of older persons in the world. The traditional norms and values of Indian society laid stress on showing respect and providing care for the elderly. The advents of modernization, industrialization, urbanization, occupational differentiation and growth of individual philosophy have eroded the traditional values the vested authority with elderly. These have led to defiance and decline of informal care for elder's among members of younger generation. Although family support and care of the elderly are unlikely to disappear in the near future, informal care of the elderly seems likely to decrease at the nations develop economically and modernize in other respect. Hence, this study has focused on the quality of informal care received by the elderly.

Kew Words: Informal Care, Formal Care, Quality of Life, Elderly.

The ageing of the population is a global trend because of the decrease in mortality rate (OECD, 1988). The United Nations anticipates that the number of people aged 65 and over will increase to 822 million all over the world by 2025 (Martin & Preston, 1994). The increase of ageing population is a major concern to both the family and the government. Usually, the deterioration of health will begin particularly after the age of 75 which therefore will cause the elderly suffering longstanding illness, disability or infirmity (Dean, 1998). The ageing population, especially those with morbidity, may need care both from the informal and formal sectors.

Traditionally, informal care refers to the care offered by virtue of social relationship between individuals, whereas agents of a government or non-government organisation render formal care to individual with well-defined categories of need. Therefore, formal care is a form of specifically designed interventions with highly desirable outcome. On the contrary, informal care is neither structured nor well-planned care. Accordingly, care recipients perceive informal care as an expression of valuing and caring about them as an individual (Abrams, 1978 and Qureshi, 1990). Thus, informal care recipients experience such care qualitatively, which is different from the care provided by formal organisations. It is argued that the nature of formal care, which is money for work, cannot replace the genuine warmth and affection in informal care.

Elderly in India

Today, India is home to one out of every ten senior citizens of the world. Both the absolute and relative size of the population of the elderly in India will gain in strength in future. For a developing country like India, the rapid growth in the number of older population presents issues, barely perceived as yet, that must be addressed if social and economic development is to proceed effectively. In 2000, people over 60 years of age composed roughly 10 per cent of the world's population. By 2050, that percentage is projected to increase to 21 per cent (Sowers and Rowe, 2007). Developing countries will experience almost two thirds of this growth spurt in the ageing population (Chakraborthi, 2004).

Traditionally Indian Society has respected and regarded the aged. The younger generations treated the aged as a treasure house of care,

knowledge and authority. Family has been felt complete if there is at least on aged person. For performing religious rituals, on the occasions of births, deaths and particularly in marriages, the elderly are consulted and their opinion is respected. There are a number of instances where elderly of other families are consulted on such occasions where there are no elderly in the family. Elderly thus commanded care in traditional Indian society. Care was never demanded. However, as it is repeatedly repeated by every scholar, urbanization and industrialization have disturbed the extended family setup for simple economics reasons, thereby making state and the community think of elderly care (Madhava Rao, 2006).

The growing incidence of elder abuse and severe fissures in the multigenerational family or household have forced many older persons to abandon their family home; some of them have also been "pushed out" and have thus been left shelter-less. Most urban areas appear to have a growing incidence of cases of abandoned elderly. A new culture of "peer group participation" being attempted by the old persons appears to be taking roots in many parts of urban India; Old Age Homes of various types are rapidly becoming a choice for many "abandoned", "left out" or neglected" old persons with or without survival resources (Sugan Bhatia, 2008). Lack of attention from the near and dear persons gives rise to a feeling of negligence and avoidance. This is especially true in case of physically ill and dependent elderly persons. Feeling of ageing has a direct bearing on issues related to an informal care system.

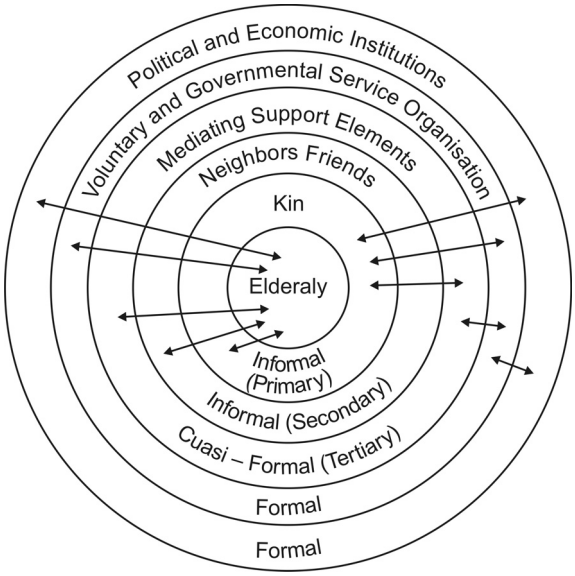
Informal Care to the Elderly

Informal care, or informal support (Litwin & Auslander, 1990), is a fundamental feature of community care, and is included in the broad concept of community care. It is a continuum of helping behaviours or assistance that is not derived from legal mandates or publicly financing mechanism, but from normative or voluntary interpersonal association. Chapell and Blandford (1991) pinpoint that there are two perspectives about the relationship between the informal and formal care: substitution and complimentarily. The substitution approach views formal care as a substitution when the hierarchical model of care is not available. The hierarchy of care is popular in the help-seeking process among the elderly. Usually, the elderly may have secondary caregivers in supplement of the primary one (Tennstedt *et al.*, 1989).

Hierarchical Substitution (Cantor, 1983) is the spouse is viewed as the primary caregiver, and then unmarried daughters, married daughters, sons, close kin and friends as supportive helpers, in order of familial closeness and intimacy to the frail older person (Qureshi & Walker, 1989).

Informal care for the elderly is important in societies built on community relations. Immediate surroundings constitute the system of informal care as far as an elderly person is concerned. A model of social care envisaged by Cantor (1979) recognized support components of family, community, social agencies and government. It has also emphasized the ever-changing interactive nature of the system. Envisioning an older person at the centre of a series of concentric circles, this model contains supports ranging from informal at the centre to formal at the periphery. Older persons interact with each of these circles and sub-systems at varying times and for varying types of assistance. At times, these separate networks interact with each other and overlap.

Model of Social Care



A model of the social care system of the elderly Source: Cantor (1979)

Methodology

The purpose of the study was to assess the quality of informal care received by the elderly and to find out association between socio-demographic variables and the quality of informal care received by the elders.

Sample

A total of 50 respondents were selected from Tiruchirappalli city through simple random sampling procedure.

Tools Used

Interview schedule was used to collect the data. Quality of Informal Care received by the respondents under study was measured using Quality of Informal Care Scale (QICS) developed by Help-Age International. The interview schedule was also pretested.

The data collected were analysed using SPSS version 13.0 and findings were depicted in the form of percentages and proportions.

Results

Table 1
Distribution of Elderly by their Age, Sex and Income

Characteristics	*No. of Respondents (n:50)*	*Percentage*
Age		
60–65 years	24	48.0
66–70 years	15	30.0
Above 70 years	11	22.0
Sex		
Male	21	42.0
Female	29	58.0
Income		
Rs (100 to 500)	16	32.0
Rs (501 to 1,000)	04	8.0
Above Rs 1,000	03	6.0
No Income	27	54.0

The above table indicates that less than half (48%) of the respondents are in the age group of (60–65) years and more than one fourth of the respondents (30%) were in the age group of (66–70) years. With increasing age, the proportion of elderly feeling ageing as a problem increases. So the elders in the age group of (60–65) years are in need of informal care. The study also indicates that more than half (58%) of the respondents were female. Hence, the female respondents are in need of care and support from their family members. With respect to the income of elderly, more than have (54%) of the respondents do not have any income and depend on other family members for financial support.

Table 2
Distribution of Respondents by their Educational Qualification, Occupation and Marital Status

Characteristics	*No. of Respondents (n:50)*	*Percentage*
Occupation		
Working	23	46.0
Not Working	27	54.0
Educational qualification		
Illiterate	27	54.0
Primary	17	34.0
High School	6	12.0
Marital Status		
Married	29	58.0
Unmarried	3	6.0
Widowed	18	36.0
Type of Family		
Joint	20	40.0
Nuclear	30	60.0

With regard to occupation of the respondents more than half (54%) of the respondents are not going for any work and less than half (46%) of the respondents are going for work. Education is found to be influencing perception of ageing as a problem while combined with status of elderly at home. With increase in level of education the

perception that ageing is a problem declines in both the groups of elderly. The table shows that more than half (54%) of the respondents were illiterate. So the elders who were illiterate are in need of formal and informal care for their well-being. This study also states that more than one third (36%) of the respondents were widows and they were in need of social care and support. The above table depicts that significant proportion (60%) of the respondents are form nuclear family and remaining 40% of the respondents were from joint family and further most of the earlier studies states that elders in nuclear families lack informal care and they are in need of proper care and support.

Table 3

Difference Between the Respondents Type of Family and Quality of Informal Care Received by the Elderly

S. No.	*Type of Family*	*Mean*	*Std. Deviation*	*Statistical Inference*
1.	Joint	103.28	24.76	t =2.386
2.	Nuclear	119.72	23.93	P< 0.05 Significant

The above table depicts that there is a significant difference between the type of family of the respondents and quality of informal care is due to the fact that industrialization and urbanization have brought changes to family structure in India to a great extent. The extended family that existed in the society has changed to a nuclear family. This has affected the position of the elderly in the family as well as the families' capacity to take care of the aged. However, in India the older people are still cared for by the younger relations. As keeping parents in old age homes draws criticism from social networks and community at large, living in old age homes is not popular in India. The strong cultural pressure makes the families to take care of the elderly. Traditionally the aged felt that the money spent on their offspring was an investment that could enjoy the returns when they become old. They derived psychological and economic support from the younger generations.

Table 4
Karl Pearson's Co-efficient of Correlation Between the Respondents Various Socio-demographic Factors and Quality of Informal Care Received

S. No.	Variable	Correlation Value	Statistical Inference
1.	Age and Quality of Informal Care	–0.107	P > 0.05
2.	Monthly Income and Quality of Informal Care	–0.104	Not Significant
3.	Number of Elders in Family and Quality of Informal Care	–0.158	P > 0.05 Not Significant P > 0.05 Not Significant

Successful adaption in old age which composes of life satisfaction and social independence depends on the elderly person's health and socio-economic status (Heikkinen, 1989). But, Table 4 shows that there is no significant relationship between the age, monthly income, number of elders in family and quality of informal care received by the elders. This finding corresponds well with the study conducted by Asharaf (2007) stating gender dimension in ageing especially in perceived burden and which depend on the age of elderly. Life stresses are perceived more by females and those in higher ages. Physical concerns bother more males in older ages, financial concerns bother more males in older ages, and psychological concerns bother more females in older ages. It is a combined effect of physical, financial and psychological factors that troubles elderly; among them physical concerns are more pronounced. Development of health care facilities with geriatric specialty is a dire need.

Discussion

Old age is the closing period in the life span. It is a period when people "move away" from previous more desirable periods or times of "usefulness" and this study reveals that nearly half per cent of the respondents where in the age group of (60–65) years where dependency also increases. Since old age is the period in which most of the elders get retirement and remain jobless and often depend on the other family members for their financial support. Moreover, this study states that more than half of the elder persons are not working

and depend others for their financial support. One common problem unique to elderly is physical helplessness, which necessitates dependency on others and in this study, the female respondents have more dependency compared to the male counterparts. Education is found to be influencing perception of ageing as a problem while combined with status of elderly at home. With increase in level of education, the perception that ageing is a problem declines in both the groups of elderly. It was found that the elders who were illiterate are in need of formal and informal care, whereas the elders with good educational background are independent. Moreover, the present study reveals that more than half of the respondents are illiterate. In our society it is important to note that elderly who have savings in the bank or who have assets are more likely to receive proper care and support from the caregivers. But there is a contrary in this study, where there is no association between the income and quality of informal care.

Recommendations

- Encouraging the family members in the first place to take care of their aged parents and incentive scheme wherever feasible and possible.
- Including geriatric care in the curriculum of schools so as to sensitize the younger generations to the problems of the aged so that they may keep the family traditions intact.
- Giving training on retirement planning to the workers who are expected to retire within two years, covering socio-psychological and economic aspects of retired life.
- Establishing district-wise old age homes with community support.

Conclusion

The responsibility of caring of the elderly is traditionally that of the immediate family and most often by the sons. However, with a growing trend towards nuclear family set up and the associated decay of the extended family structure, the vulnerability of the ageing population is increasing. In order to cope with this situation, it is

necessary that the caregivers be made aware of the physical and mental conditions and problems of the elderly people so as to meet their needs as far as possible in the home setting itself. Hence, informal care in India seeks an adequate attention to provide positive interventions of strengthening social support systems for the older persons.

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Depression, Loneliness And Insecurity Feeling Among the Elderly Female, Living in Old Age Homes of Agartala

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ABSTRACT

As the longevity of life in modern era is increasing day by day, the number of aged person is also increasing. India is still poised to become home to the second largest number of older persons in the world. Not only the population of aged is in rise, but the psychological problems among the aged is also in rise. The concept of old age home is now being popularized in India. Yet, Indian aged have traditional concept about family. But, many of them are now bound to live in old age homes. Are they happy with this living? Are they feeling lonely or insecure? Current study is an attempt to find out the answer of these questions. Two groups of female aged person were taken for the study by using random sampling procedure. 75 of them are residing in different old age homes at Agartala, Tripura and 45 of another control group are residents of main stream families, i.e., they are living within the family with their sons and daughters. The level of depression, loneliness and security feeling were measured by Beck's Depression Inventory, Revised UCLA Loneliness scale, and Maslow's security-insecurity test respectively. Result reveals that the elderly women who are residing in old age homes have much

depression, loneliness and insecurity feeling than the elderly who live with their families.

Key Words: Depression, Loneliness, Security-insecurity feeling, Old age home.

Being elderly is a normal, inevitable, biological phenomenon. The elderly population in the world is increasing. It is expected that by 2025, the world's population will include more than 830 million people at an age of 65. Developing countries such as China and India have the largest total population, and will continue to have the largest absolute number of elderly people.

Feminization of the elderly population is also one important phenomenon. It is expected that by 2016, 51 per cent of the population would be the women. 48.2 per cent of the elderly persons are female in India and among them 55 per cent are widows. The psychological conditions of the elderly population is not so good. Depression and suicide are becoming more and more likely to occur among older adults. Older adults are becoming more and more depressed and committing suicide at a greater rate than ever before due to their failing physical and mental health.

Official suicide statistics identify older adults as a high risk group. Among older persons there are between two to four suicide attempts for every completed attempt (Miller, *et al.*, 2001). However the rate of completion of suicide in aged is 50 per cent higher than the population as a whole, because generally, in this age group, who attempt suicide dies from the attempt more often than any other age group. Thus, elders kill themselves at a greater rate than any other group in society, and they tend to be more determined and purposeful (Weaver and Koenig, 2001).

Depression is the most commonly diagnosed mental health problem in older adults who have attempted suicide (Zweig and Hinrichsen, 1993). Depression sometimes accompanies chronic diseases, particularly when the disease impairs function (Casten, *et al.*, 2002). Physical health status is the most consistently reported risk factor for the onset and persistence of depression in late life (Gatz and

Fiske, 2003). Depression also can induce anxiety in older adults. The relationship between anxiety and depressive symptoms in later life are relatively common among older adults (Lenze *et al.*, 2000). Still, the particular features that may distinguish older with anxious depression from elders with depression alone is known only to a little extent (Lynch, *et al.*, 2000).

However a number of issues are there that can make difficult to detect depression in old age. In comparison to younger, the aged under-report depressive symptoms. Moreover, they sometimes deny as being sad, down or depressed. For this reason, depressive symptom in old age remains undetected and untreated for a long period.

Loneliness is a subjective, negative feeling related to the person's own experience of deficient social relations. The determinants of loneliness can be explained on the basis of 2 causal models. The first model examines the external factors, which are absent in the social network, as the root of the loneliness and the second model examines the internal factors, like personality and psychological factors. Loneliness may lead to serious health-related consequences. It is one of the 3 main factors leading to depression as advocated by Green (1992). It is also considered as an important cause of suicide and suicide attempts. Hansson *et al.,* (1986–87) claimed that loneliness was related to poor psychological adjustment, dissatisfaction with family and social relationships. When people grow older, they experience age related losses. These losses prohibit to maintain or acquire new desired relationship, which interns leads to loneliness. The aged feel lonely as a result of living alone, lack of family ties, reduced connection with the culture of origin and inability to participate actively in community activities. These all factors are present mostly in case of aged living in old age homes of our country.

The adverse effect of loneliness on health in old age has been reported by many researchers (Heikkinen *et al.*, 1995). The presence of perceived loneliness contributed strongly to the effect of depression on mortality (Max *et al.*, 2005). Thus, depression is associated with mortality when feelings of loneliness are present. Depression, on the other hand, is a problem that often accompanies loneliness. Most

people experience social isolation and loneliness in old age, especially who lived in old age homes . Loss of important relationship may lead to feeling of loneliness. Posner (1995), points out that older people tend to eradicate loneliness by making friendship with those within the same age cohort. In one of the study conducted in Gujarat, it was found that the institutional aged do not feel loneliness living away from children, but their answers are justification which reflect an artificial armor which they created around themselves to protect against the emotional pain meted out by children . Only 22 per cent admitted that they did experience loneliness living away from their children (Das & Shah, 2004).

Insecurity is a feeling of general unease or nervousness that may be triggered by perceiving of one self to be vulnerable in some way, or a sense of vulnerability or instability which threatens one's self-image or ego. Persons who feel insecure, have lack of confidence in their own values and capabilities, lack of trust in themselves. The older generation of India is caught between the decline of traditional values and absence of adequate social security system (Gormal, 2003).

The impact of globalization is inevitable, but this impact increased the economic burden on the elderly. Women are susceptible to victim of more negative impact because they have practically non-existent property rights and other social security measures (Bhat, 2001). Lack of adequate family support, loss of the spouse and social and emotional insecurity lead them to a general feeling of insecurity, especially the aged women who are bound to reside in old age home.

There is no doubt that ageing is universal for both men and women. But, the issues of aged women requires special attention because gender always influence the ageing experience. Generally women are in low status from their male counter parts. In developing countries like ours, women face triple jeopardy, i.e., being female of patriarchal society, being old in a first changing society and being poorer as they are likely to work in domestic, agricultural and informal settings (Dubey *et al.*, 2011). Most of the aged women in India are illiterate and unemployed. The other barrier of their aged life is widowhood. Elderly women live longer and suffer greater effects of loss and are more often widows. Widowhood of women has been

found to be strongly associated with depression (Zisook *et al.*, 1994, Turvey *et al.*, 1999). Women have longer life expectancy than men and usually women marry men older than them. Most of the aged women residing in old age homes of India are thus illiterate, poor, widow women. As a home maker women are mostly involved in family affairs. Loss of family environment and living in old age home thus become more stressful to the women. General feelings of the elderly women living in the families was found better in one study conducted in Jammu city. In the same study, elderly women living in institution was found lonelier, depressed and dissatisfied with life (Dubey *et al.*, 2011).

After the above mentioned literature survey and analysis, a research need was envisaged to study the nature of depression, loneliness and insecurity among the aged women of Agartala, especially the aged who live in old age homes of our town.

The major objectives of the study were:

1. To collect information regarding various issues of elderly women, living in old age homes at Agartala.
2. To examine the level of depression, loneliness and security-insecurity in elderly women living in old age homes as well as elderly women living within the family set up.
3. To study whether any difference exists with respect to depression, loneliness and insecurity feelings among these two groups.

Hypothesis: Three hypotheses were formulated for drawing inference from the present study:

(a) There is no significant difference in the depression level of elderly women residing in old age homes and elderly women residing within the family set up.

(b) There is no significant difference in the level of loneliness in elderly women residing in old age homes and elderly women residing in the families.

(c) There is no significant difference in the security or in security level of elderly women residing in old age homes and elderly women residing in family set up.

Method

Sample

The sample consists of 75 elderly women who were living in different old age homes of Agartala. Their age ranged from 60 years to 75 years. All of them belonged to middle or lower socio economic families. A comparative group of 45 elderly women with same range of age and socio-economic condition was also included in this study. All the respondents of the comparative group were residing with their spouses or children. Random sampling procedure was used in the selection of the respondents (N = 120) of this study.

Tools Used

Following three psychological tests and background information schedule were used to collect data from the sample sub-groups:

(a) *Background information schedule:* prepared by the researcher for the purpose of this study.

(b) *Beck's Depression Inventory (BDI-II):* It is a popularly used depression inventory prepared by Aaron D. Beck. It has a high test retest reliability (.93) and high internal consistency (.91). High scores indicate higher depression according to this scale.

(c) *Maslow's Security-Insecurity inventory:* The original inventory was developed by Maslow. The local adaptation of this test (having reliability .4 and validity co-efficient .) by Deb and Modak (2007), was used for the purpose of the present study. High scores in this test means that the individual is more secured and vice versa.

(d) *Loneliness Scale:* Revised UCLA scale was used to collect data. This test was devised by Russell, Peplau and Cutrona in 1980. The test is highly reliable with a co-efficient of alpha .96. The test retest correlation was .73. It has a high validity coefficient measuring .79. The score ranges from 20–80. High scores indicate high level of loneliness and vice-versa.

Procedure

With due permission from the institutional authorities and oral consent from the respondents, (N = 75) data were collected from three

old age homes of Agartala . Rapport was established with each respondent individually and after gaining confidence of respondent, information about her and other details were collected. The three inventories were administered individually to all the respondents in three different sessions. Confidentiality was maintained regarding the informations provided by them. Data were also collected from aged women who were residing within the family set up (N = 45) by using the same procedure and also by the help of all the three scales. After the collection of data and appropriate scoring, data were tabulated properly and necessary calculations were done to find out significance of difference between both the groups of respondents.

Results

Table 1
Basic Information Regarding the Elderly Women Residing in Old Age Homes of Agartala

Variables	*Categories*	*No and %*
1. Age	60–64 years	21(28%)
	65–69 years	48(64%)
	70–75 years	06(8%)
2. Education	Illiterate	29(38.67%)
	Semi-Literate	17(22.67%)
	Up to school level	28(37.33%)
	Up to college level	01(1.33%0
3. Religion	Hindu	73(97.33%)
	Muslim	02(2.67%)
	Others	Nil (0%)
4. Type of Family from where she comes	Joint	62 (82.67%)
	Nuclear	10 (13%)
	Others	03 (4%)
5. Locality where lived	Urban	41 (54.67%)
	Rural	34(45.33%)
6. Period of living in old age home	Less than 1 year	11 (14.67%)
	1–5 years	47 (62.67%)
	More than 5 years	17 (22.67%)

Table 2
Marital and Personal Information of the Elderly Women Living in Old Age Homes of Agartala

Variables	*Categories*	*Nos. and %*
Marital status (N=75)	Married	71 (94.67%)
	Unmarried	04 (05.33%)
Status of the married (N=71)	Widow	59 (83.09%)
	Deserted by husband	12 (16.90%)
No. of children (N=71)	Nil	05 (07.04%)
	1 child	04 (05.63%)
	2 children	21 (29.58%)
	3 children	22 (30.98%)
	More than 3 children	19 (26.76%)
Whether having son or not (N=71)	Yes	57 (80.28%)
	No	14 (19.72%)
Reason for coming in old age home (N=75)	Having no child	04 (05.33%)
	Having no son	05 (06.67%)
	Desertion by the family	49 (65.33%)
	Family problems	11 (14.67%)
	Others	06 (08.00%)
Whether family comes to visit (N=75)	Yes	68 (90.67%)
	No	07 (09.33%)
If yes, then frequency of visit (N=68)	Regularly	10 (14.71%)
	Occasionally	21 (30.89%)
	Rarely	32 (47.06%)
	Very rarely	05 (07.35%)

Table 3

Mean, SD and T-Value of Scores of Depression, Loneliness, and Security-Insecurity of Elderly Women Living in Old Age Homes and Elderly Women Living within the Families of Agartala

Variables	*Elderly Living in Old Age Home*		*Elderly Living Within Families*		*T-Value*
	Mean	*SD*	*Mean*	*SD*	
Depression	16	5	12	2.21	6.06*
Loneliness	31.43	5.08	20	2.20	17.06*
Security-insecurity	32.87	3.82	36.62	2.64	–6.47*

* Significant at .01 level.

Discussion

From the data it appears that maximum number of the elderly women living in old age homes were illiterate or semi-literate. They were Hindu widows, who belonged to urban and rural areas of Tripura (see Table 1). Maximum number of them were deserted by their family and family members who visit them rarely or occasionally (see Table 2). The results of the depression, loneliness, and security-insecurity inventory show that the Mean depression score of elderly living in old age homes is 16 ± 5, Mean loneliness score is 31.43 ± 5.08 and Mean security-insecurity score is 32.87 ± 3.82.

On the other hand, the mean scores of Depression, Loneliness and Security-Insecurity were 12, 20 and 36.62 respectively, in case of aged persons who were living in their families. The Sds of these concerning variables was 2.21, 2.20 and 2.64 respectively.

The result of t-test on Beck's Depression Inventory reveals that the there is significantly difference ($p < .01$), between both the groups. The elderly who are living in old age homes are more depressed. The occurrence of depressive symptomatology is a prominent condition amongst older people, as many studies have demonstrated the prevalence of depressive symptoms increases with old age (Kennedy, 1996). Severe depression in people living in old age homes is more and it is twice as observed by Jaruwala V. *et al.*, (2010). Through a statistically significant depression in particular group was not observable,

depression is present in person living in old age home (54.3%) of Gujarat. Study of gender difference with respect to depression reveals that elderly women are more prone to depression than elderly man (Kessler, 1993). Our findings about the depression level of females living in old age homes corroborate with these findings, although gender difference is not taken into consideration in the present study.

The t-test between the loneliness scores of institutional aged women and aged resides in families also showed a significant difference ($p < .01$). Previous studies indicate that increase in age is a major risk factor for feeling of loneliness and institutional aged are more lonelier (Posner, 1995, Das & Shah 2004). Our findings also showed that aged residing in old age homes of Agartala are lonelier. Loneliness coupled with other physical and mental problems may raise feeling of depression in the elderly people.

The test of significance about security-insecurity feelings reveals that the difference here is also significant ($p < .01$ level). So, it can be said that the aged women living in old age homes are significantly more insecure than the aged women living in their own families. Feelings of insecurity arise from lack of control and confidence. In India one-fifth of the aged (i.e., 21%) feel insecure with feelings of insecurity being higher. Among them 15 per cent lived in old age homes (Rajeshwar, 2009). The insecurity feeling may arise from loneliness and lead to depression. Present findings corroborates with the previous findings, that is, institutional aged women are more insecure. Insecurity here does not indicate any type of physical insecurity, rather, it is the indication of deep psychological insecurity arising due to separation from the families.

Psychological dimensions not only have a direct bearing on the mental health of the older persons but also affects indirectly, all other dimensions of their living. In one of the study conducted in Delhi (Bhattacharjee & Khan (2008), it was found that the mental health problems in institutional aged are more severe than the aged living in main-stream families. The findings of the present study are more or less similar to this finding. As a whole, it may be said that the elderly

women living in old age homes are not under good mental health. They are living there because they have no other choice

Conclusion

So, the level of depression, loneliness and feeling of insecurity varies with the variation of the environment where the aged person lives. It is evident from these findings that the aged women are living in old age homes are more depressed, more lonely and feel more insecure than the aged women who are living in families. It can be said that the well-being of the older adults is markedly affected by the feeling of alienation from the family.

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Evaluation of Cognitive Status Among the Elderly

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ABSTRACT

Cognitive ageing is a major burden for the society and a major influence in lowering people's independence and quality of life. It is the most feared aspect of ageing. The study was undertaken to evaluate the cognitive status among the 600 elderly males and females aged 60 and above through the Mini Mental State Examination (MMSE) in the city of Jodhpur. The study showed that more females (68.67%) were cognitively normal than males (62%) whereas more females (2.67%) suffered from severe cognitive impairment than males (0.67%). Gender and cognitive scores showed a significant difference at $p < 0.05$ as revealed by Chi square test. A highly significant negative correlation was found between the age and MMSE ($r = -0.159$, $p < 0.05$). Thus, indicating that with increase in age, a decline in cognitive status was observed.

Key Words: Elderly, Cognitive Status, MMSE.

Ageing is a constant, predictable process that involves growth and development of living organisms. This can't be avoided, but how fast we age varies from one person to another. Ageing can also be defined as a state of mind, which does not always keep pace with the chronological age. Attitude and how well one faces the normal changes,

challenges and opportunities of later life may best define one's age. Numerous changes occur in the brain structure and function with age. These include loss of brain cells, reduced transmission of impulse from the brain and deposition of end products of metabolism of brain cells. The clinical features of an aged brain are subtle or manifest alterations in cognition and behavior. Age associated memory impairment is associated with gradual onset of memory dysfunction which can be substantiated by appropriate tests. Cognitive ageing is a major burden for the society and a major influence in lowering people's independence and quality of life. It is the most feared aspect of ageing. Age related cognitive decline reduces quality of life, is an increased burden to sufferers and their families placing a massive financial load on the society. Thus, the aspect of cognitive status is included in this study purview.

Methods

The present study is a cross sectional study planned on the local elderly population of Jodhpur city. The study population consisted of 600 persons aged from 60 to 92 years wherein there were 300 each of males and females. The sampling frame consisted of community dwellers of both the sexes. The elderly were further classified in three different cohort groups age wise, viz, 60–69 years (Young-Old), 70–79 years (Old-Old) and 80 years and above (Very-Old).

The period from February 2008 to August 2008 was extensively utilized for conducting the survey by interview method. Data was collected from the subjects by visits at homes, parks, public meeting places, places of worship, day-care centres.

The tool for data collection consisted of a questionnaire and interview. A semi-structured questionnaire on Socio-Demographic profile was developed whereas the cognitive functions were assessed as per the standard scale of Mini Mental State Examination (MMSE).

Mini-Mental State Examination (MMSE)

MMSE is commonly used to assess cognitive status in epidemiological field studies. This test given by Folstein *et al.* (1975) is a brief 30 point questionnaire. The MMSE is a brief and objective screening test for cognitive impairment that has proven to be valid and reliable

across a variety of clinical, epidemiological, and community survey studies. It is quick, easy to use, and acceptable to respondents and examiners. It is an effective and widely used method for detecting and quantitatively estimating the severity of cognitive impairment and for documenting cognitive changes over time. In a variety of professional training programs, the MMSE is taught as a valid and reliable method of cognitive assessment in health care settings.

In the span of about 30 minutes, it assesses various functions including orientation, registration and recall of information, attention and calculation, language and visuospatial construction.

MMSE scores were categorized as mentioned by George *et al.* (1991):

- 24–30 indicates normal,
- 18–23 indicates mild cognitive impairment, and
- 0–17 indicates severe cognitive impairment.

The data was tabulated and further subjected to statistical analyses. Mean, Standard Deviations (SD), Chi square and Correlation were obtained for the variables of the study population.

Results

The socio demographic profile of the elderly population was studied for marital status, educational status and living arrangement. These factors were considered as they play an important role in the cognitive functions of an elderly.

Majority of the elderly (76.33%) were married, wherein, there were 82.67 per cent males while a lesser number of females (70%). There were slightly more females (10.33%) than males (8.33%) who remained unmarried and more widows (19.67%) were found as compared to widowers (9%).

The various categories under which the entire study population was assessed were primary, middle, senior higher secondary and graduation. About 4 times more females than males, were found to have studied till or less than the primary level. Upto the middle school education, the number of males (23.67%) increased and the females (15.33%) decreased. ¼th (25.5%) of the total geriatrics had received

education till senior higher secondary and the highest numbers (37.85%) of the subjects were graduates.

In the present study, it has been observed that maximum, almost half of the subjects (49.67%) lived with their offspring. The least number (3.83%) of elderly were found as living alone and nuclear family arrangement included equal number of both males (22%) and females (21.33%).

The cognitive status of the entire population has been presented in Table 1. More than half (65.33%) of the elderly in the entire study population were rated as having a normal cognitive status, i.e., contributing to a good attention span, recalling, registration, reading and comprehending abilities. Fewer (33%) of the geriatrics reported to be having a mild cognitive impairment whilst only 1.67 per cent of the elderly suffered from severe cognitive impairment wherein poor attention span and calculation, recalling and registration abilities, comprehending and writing skills were mostly noted.

Considering males and females separately on their cognitive functions, the following picture was observed. More females (68.87%) scored well on the cognitive scale than their counterpart males (62%). Although not much difference (7%) was found between males and females. The areas where females conquered males gave an indication of more presence of mind, attention span and recalling abilities in them.

Mild cognitive scoring was thus, seen among less than 30 per cent females compared to around 37 per cent males. Difficulties in this category were more with the "serial 7's" which refers to subtracting 7 from 100 and continue doing that till 5 more times until asked to stop, of the MMSE scale, also, recalling and comprehension were other areas of cognitive disability. Reduced income due to retirement leads to a fall in the living standards of the elderly males which does have mental and social consequences. This contributes as one of the factors as to the difference in mental status of males and females.

The trend reversed as 2.66 per cent females compared to only 0.67 per cent males scored low and were rated as having severe cognitive deficit. Thus, low cognitive impairment was apparently more in females than males. Time orientation and place orientation partly, some bits of serial attention and calculation, naming were the only few

areas which could be performed by them. Loss of spouse-widows, are prone to face social stigma and ostracism, economic insecurity, social isolation due to which cognitive defects creep in more amongst the females.

The mean MMSE score for the overall elderly studied was 24.65 ±2.63. The mean cognitive status score for males (24.64 ±2.48) and females (24.65 ±2.78) was almost the same.

The data were analysed by multiple regression, using as regressors MNA, ADL, IADL and the other socio demographic factors. These variables were held constant. The regression was a rather poor fit, wherein the total contribution of the independent variables was only 4.7 per cent of the total variance of IADL scores ($R^2 = 0.047$). Complex activities (IADL) and living arrangement had a marginal contribution on the cognitive status ($p < 0.05$) and the effect of age was significant.

Gender and cognitive scores showed a significant difference at $p < 0.05$ (Table 1). An inverse non significant correlation between MMSE and gender ($r = -0.002$, $p > 0.05$) was observed.

Table 1
Cognitive Status According to Gender

Gender / *MMSE*	*Male (n=300)*	*Female (n=300)*	*Total (n=600)*
24–30 Normal	186 (62)	206 (68.67)	392 (65.33)
18–23 Mild	112 (37.33)	86 (28.67)	198 (33)
0–17 Severe	2 (0.67)	8 (2.66)	10 (1.67)

$\chi^2 = 8.035$, $p < 0.05$

Table 2
Cognitive Status According to Age

Age / *MMSE*	*60–69 (n=198)*	*70–79 (n=314)*	*80+ (n=88)*
Normal	135 (68.18)	211 (67.20)	46 (52.27)
Mild	59 (29.80)	101 (32.17)	38 (43.18)
Severe	4 (2.02)	2 (0.63)	4 (4.55)

$\chi^2 = 7.819$, $p < 0.05$.

Figure 1
Cognitive Status According to Age

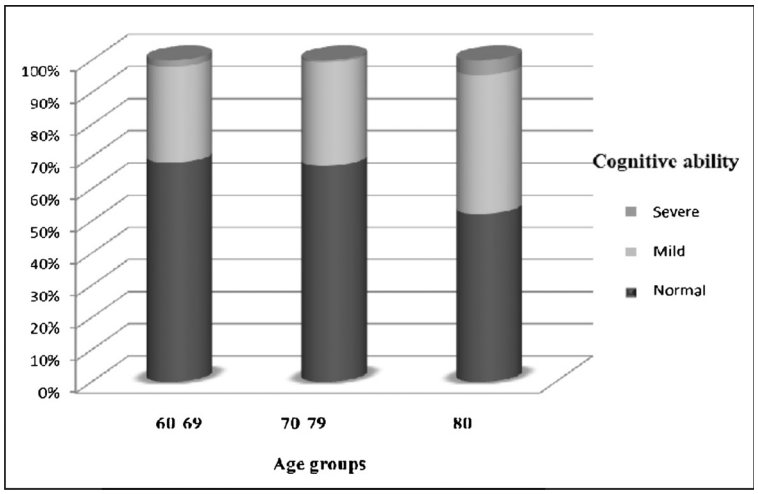

Table 2 reveals age wise distribution of the cognitive status in the elderly population to note the changes in mental abilities within different age groups.

Maximum number of elderly of all age groups enjoyed having normal cognitive status. In the age groups of 60–69 years and 70–79 years, around 68 per cent had normal cognitive functioning. This declined by 16 per cent as age went above 80, though, more than half (52%) of the elderly in this age group enjoyed normal cognitive status. Elderly people are highly prone to mental morbidities due to ageing of the brain, problems associated with physical health, cerebral pathology, socio-economic factors such as breakdown of the family support systems, and decrease in economic independence.

The least number of people (29.80%) having mild cognition fell in the age group of 60–69 years. Following this, there was a slight increase in the number of elderly within the ages 70–79 years. Around $^{1}/_{3}$ rd of the study population in the age group of 70–79 years reported as having mild cognitive impairment. The number of people continued to increase, with the age increasing to 80 and above wherein it was found highest (43.18%). Hence, with increase in age the number of people being affected by mild cognition disability increased. Common

chronic and neuro-degenerative disorders like Alzheimer's disease are a result of this cognitive slowdown in this last phase of life.

The trend continued to remain the same with maximum number (4.55%) of aged suffering from severe cognitive impairment within the age 80 and above. The numbers reduced to 2.02 per cent in the 60–69 years age and only a mere 0.63 per cent were in the age group of 70–79 years.

Significant difference was noted between MMSE scores with age ($p < 0.05$) as shown in Table 2. A highly significant negative correlation was found between the age and MMSE ($r = -0.159$, $p < 0.05$). This indicates with increase in age, a decline in cognitive status came into being.

To understand clearly the changes occurring with age amongst the genders are presented with respect to cognitive function in Table 3.

Females (72.07%) overshadowed males (63.22%) in the 60–69 years age group when normal cognitive status was considered. The same trend continued in the 70–79 years group, although with not much difference between males and females. Here too, almost 68 per cent females remained higher than the number of males (66.46%). The difference between the sexes increased to around 15 per cent with increase in age to 80 and above years. Only about 46 per cent males as compared to 61 per cent females fell in this category of normal cognitive status in the Very old age group. Females thus, can be said to be mentally more alert and displayed better functioning in all age groups. Loss of economic stability after retirement perhaps, poses as one of the major determinants in the males affecting their cognitive functioning.

Mild cognitive impairment was shown by males (36.78%) but fewer females (24.33%) in the ages 60–69 years. A remarkable difference of almost 12 per cent was seen amongst males and females. As age increased to 70–79 year age group, not much of a difference between the genders was noted. Few females, around (31%), than one third males (33.54%) suffered from mild impairment in the same age group. In the 80 years and above age group, half of the males whilst only one third females were rated as having mild cognitive status. Apparently, a striking gender wise difference of 17 per cent could be

observed. Within all age groups, the remarkable feature remains that males were more prone to decline in cognitive functions than their female counterparts. Recalling, repetition, reading and comprehension were some of the areas where the elderly mostly lacked.

Severe cognitive impairment affected about 4 per cent females in the Young old age group and only 1.31 per cent females in the ages of 70–79 years. None of the males suffered from severity in cognitive functions in these age groups. However, in the ages of 80 years and above, cognitive functions of 5.56 per cent females and 3.85 per cent males were severely impaired. Slight time orientation, place orientation, a bit of serial attention and calculation and naming were the only few areas which could be completed by them.

Considering males only, a significant difference was observed between their cognitive status and age groups, $p < 0.05$ (Table 3). Thus, a significant difference was noted regarding the scores of men on an age wise basis. On the other hand, in females, cognitive scores and age was non significant at $p > 0.05$.

MMSE scores and age of males when considered, a highly significant negative correlation was observed ($r = -0.207$, $p < 0.05$). In females, too, MMSE scores had a significant inverse correlation with age ($r = -0.118$, $p < 0.05$).

Table 3

Cognitive Status According to Age and Gender

Age / *Gender*	*60–69*			*70–79*			*80+*			*Total*
	M	*F*	*T*	*M*	*F*	*T*	*M*	*F*	*T*	
Normal	55 (63.22)	80 (72.07)	135	107 (66.46)	104 (67.97)	211	24 (46.15)	22 (61.11)	46	392
Mild	32 (36.78)	27 (24.33)	59	54 (33.54)	47 (30.72)	101	26 (50)	12 (33.33)	38	198
Severe	–	4 (3.60)	4	–	2 (1.31)	2	2 (3.85)	2 (5.56)	4	10
Total	87	111	198	161	153	314	52	36	88	600

Males- $\chi 2 = 6.956$, $p < 0.05$ Females- $\chi^2 = 1.588$, $p > 0.05$.

Discussions

One third of the subjects in the present study were found to have mild cognitive impairment as compared to the prevalence of cognitive impairment of 22.4 per cent among the elderly respondents in a rural community in Sepang, Selangor, Malaysia as reported by Sidik *et al.,* earlier in the year 2004. Though, severe cognitive impairment was to be seen hardly (1.67%) in the present work.

In the present study, 28.67 per cent of the elderly females were found to have cognitive defect. The study conducted by Swarnalatha (2007) also showed almost similar proportion (32%) among the study subjects having cognitive impairment. However, the cognitive defect was found to be higher (42.4%) in the elderly women as studied by Saha *et al.* (2010).

It was observed in the present study that, 29.80 per cent had mild cognitive impairment in the age group of 60–69 years. There was a slight increase in the number of elderly within the ages 70–79 years which continued to increase, with the age increasing to 80 and above wherein it was found the highest (43.18%). These findings are in line with the findings of Sidik *et al.* (2004), who found cognitive impairment was significantly higher among the elderly in the above 70 years age group compared to those in the 60 to 69 years age group.

A significant association between cognitive impairment and age was found in the present study. This shows increasing age had an impact on the deteriorating mental abilities of an individual. Present findings are also comparable with those of other workers. Cognitive scores decreased significantly with increasing age as speculated by Ojofeitimi *et al.* (2002). Other studies have also showed a positive association between cognitive impairment and increasing age (Lobo *et al.,* 1995; Krishnaswamy, 1995).

Saha *et al.* (2010), observed a higher proportion of cognitive impairment in women aged 70 years and above (82.3%) compared to 50–59 years group (22.6%). This was in accordance with the present findings, where too, mild cognitive impairment was more in women aged 80 and above (33%) than in those aged 60–69 years (24.33%), though the difference was not huge. This again shows, decline in the mental abilities with increasing age. Higher proportion of cognitive

impairment, in women aged 80 years and above (76.0%) compared to 60–69 years group (1.5%) was also observed by Swarnalatha in 2007.

Women usually, were seen to have very little healthy interaction with the outside world, thus lesser participation to keep themselves mentally alert and active. As in the later years of life, they became dull, thus, with low cognitive levels showing up.

Iwasa *et al.* (2005) studied Old-Old (aged 75–84 years) and Oldest-Old (aged 85–100 years) adults in Japan. Age-related differences in the MMSE total score between the Old-Old and Oldest-Old were observed in both sexes, suggesting that overall cognitive functions continued to decline over time in very old age. Age-related differences between the Old-Old and Oldest-Old in items measuring, registration, calculation and delayed recall were observed in both sexes, and in addition, time orientation, place orientation, delayed recognition, writing sentences, and copying figures were observed in females. There were no age group differences in five items: reverse spelling, naming objects, repeating a sentence, listening and obeying, and reading and obeying.

Mild cognitive impairment was seen amongst all age groups in more men than women in the present study and a striking gender wise difference of 17 per cent could be observed in the 80 and above age group. Men attained retirement in their later years which imposed a great deal on their loss of self respect, loss of social interaction, boredom and loneliness. With their daily routine of work getting disturbed and they being idle, dullness of the brain set in. This affected their cognitive abilities, thus delayed recalling, forgetfulness, comprehending and reading took over more than in women.

The mean MMSE score for the overall elderly studied in the present work was 24.65 ± 2.63, which falls in the range of normal cognitive status. These findings corroborated with the average MMSE score of 24.0 ± 4.2, which also lies in the range of no cognitive impairment (Morala *et al.,* 2006).

These higher numbers in the Very-Old age group may be explained by the known fact of biological degeneration occurring in the brain cells as one ages. This is further added on by the various psycho-social attributes. The elderly as they age, are left with fewer

people to interact with, losing out on friends, spouse or moving away from the vicinity of the city in neighbourhoods. Thus, keeping all to themselves, the rapid deterioration in the mental functioning set in.

Recommendations

The study showed the role gender and age played in the cognitive functioning of an elderly. This is an important marker to the further deteriorating conditions in various other health profiles of these "assets of the society". Thus, these vulnerable groups of our society need special concern, better attention in welfare programmes and health care services.

These findings point to the urgency of improving detection and diagnosis of cognitive functions to reduce the onset of further disabilities among the aged.

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Problems of Elderly Widows in Odisha: An Empirical Study

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ABSTRACT

The present study aimed to find out the socio-economic status, psychological and health problems, attitude towards widows' life and suggestions for the welfare of widows. 160 widows selected by purposive sampling technique were interviewed personally. A structured interview schedule consisting of simple and short questions was used for this purpose. Out of 160 elderly widows, majority (53.1%) were illiterate, 63.8 per cent were from joint family set up. Most of the respondents (93.1%) were completely vegetarian and wore simple white sarees since the death of their husbands. Majority of them opined that they were not allowed to attend the naming ceremony of a new born baby, and to enter into the marriage pendals. Most of the elderly widows had multiple health problems such as: reduced vision (81.2%), hypertension and diabetes (65% each). Majority of the respondents (70%) were not allowed to involve in their family affairs. 75.6 per cent of the respondents felt completely insecure due to widowhood. Almost all the respondents were of the opinion that widow pension should be given to poor widows, they should be made aware of the facilities provided by the Government. to the widows, society and people should give them proper respect and treat them well.

Key Words: Elderly, widowhood, Cultural practices, health problems, Geriatric welfare services.

Ageing is a biological process and experienced by the mankind in all times. It is also a multi-dimensional process. A person's activities, attitude towards life, relationship to the family and to the work, biological capacities and physical fitness are all conditioned by the position in the age structure of the particular society, in which he or she lives. Rapid ageing trends present new challenges to Government, families and the elderly themselves. (Ramchandran and Radhika: 2006). In comparison to men, women are denied access to opportunities for personal growth and self-development in education, employment, professional and political life. Furthermore, the patriarchal system and pre-occupation with sexual and reproductive functions during adult age, perpetuates the subservient role of women in the family and in the society. Women also spend majority of their working hours in domestic labour, which is usually unpaid and unrecognized. The cumulative effect of these conditions during the formative years of their life leads to women becoming marginalized in their old age as compared to their male counterparts. Women in general and older women in particular have lower status in the family and society thereby having restricted access to family or social support system. They continue to remain care providers until such time that they are physically active. Widows are the worst affected by social customs.

Widowhood in India is often described as a definitive and tragic moment in a woman's life, in which her identity is stripped away with the death of her husband. The Laws of Manu, an influential text in Hindu Scripture, had created a set of structured gender relations in the Brahmin caste. Included in the text are the statutes that a widow must remove all excess adornments, observe fasts, eat limited meals each day, forgo hot foods, replace the red sindoor on her forehead with ash from her husband's funeral pyre and observe tonsure (Zola: 1991). The same text also pronounces that a woman who is widowed cannot remarry. The ideal Hindu widow remains with her in-laws – a result of the patrilocal system of marriage in most of India – embodying this state of holy asceticism. This system of marriage places women in a situation of vulnerability after their husband's death, particularly if they do not earn income, they can neither re-integrate with their parental family, nor do they necessarily receive adequate support to

live contentedly in their husband's village. Sometimes because of the financial considerations many widows from lower-income families are not able to remain in the house of their in-laws without working or, in some circumstances getting remarried.

Widowhood, an inevitable life event for many older women has an impact on their psycho-social status. Consequent upon widowhood, many older widows are vulnerable to the development of psycho-social problems and low self-esteem. The proportion of widows in the population of 60+ years is gradually increasing. Women in the later years of life have been subjected to many hardships like economic dependency, emotional insecurity, and social estrangement, especially due to loss of spouse. However there are a growing number of elderly widows who are the victims of the triple neglect and discrimination on account of gender, age and widowhood. Widowhood is both a crisis and a problem. In the suddenness and in the sea change that it wroughts in the life of a woman, it is a crisis. As the woman tries to cope with the implications, it becomes a problem. Widows are prone to face social stigma and ostracism.

The present study was an attempt to explore different problems faced by widows in the fields like economic, social, psychological and cultural, the problems of adjustment of widows and the factors which have an impact on the life of the elderly widows in Odisha

Objectives of Study

1. To study the socio-economic background of widows.
2. To ascertain the changes in cultural practices due to widowhood.
3. To assess health problems, socio-economic problems and psychological problems of the widows.
4. To assess their attitude towards life and their suggestions for the welfare of the widows.

Method

Sample

On the basis of purposive sampling 160 widows of 60 years and above, belonging to upper castes of Hindus, were selected for this study from Jagannath Temple of PURI, Odisha.[1]

For detail information about the sample studied see the table given below:

Table 1
Socio-economic Profile of the Respondents

Age	*Widows N=160*	*Percentage (%)*
60–65	63	39.4
65–70	89	55.6
70 and above	8	5.00
Education		
Illiterate	85	53.1
Up to Primary	56	35.0
Up to Matriculate	14	8.8
Graduate and above	5	3.1
Family		
Jt. Family	102	63.8
Nuclear Family	58	36.2
No. of Children of the Widows		
0	7	4.3
1	9	5.6
2	14	8.8
3	31	19.4
4 and above	99	61.9
Present Occupation		
Begging	31	19.4
Maid Servant	14	8.8
Care taker	16	10.0
No occupation	99	61.8
Staying with		
Staying with son	35	21.9
Staying with daughter	21	13.1
Staying with in-laws	66	41.3
Staying with brother	17	10.6
In old age home	21	13.1

Cont'd...

Cont'd...

Area of Residence		
Urban and semi-urban	41	25.6
Rural	119	74.4
Age at the Time of Marriage		
Age range		
Below 15 years	8	5.0
15–19	79	49.4
20–24	55	34.4
25–29	18	13.2
30 and above	0	0.0
Age at the Time of Husband's Death		
Age range		
Below 15 years	2	1.2
15–24	11	6.9
25–34	25	15.6
35–44	55	1.9
45 and above	5	34.4
Duration of Married Life		
Age range		
0–4	6	37
5–9	11	6.9
10–14	43	26.9
15–19	41	25.6
20 and above	59	36.9
Duration of Widowhood		
Age range		
0–4	21	13.1
5–9	81	50.6
10–14	27	16.9
15–19	14	8.8
20 and above	17	10.6

Tool Used

An interview schedule was prepared for this purpose and these widows were interviewed individually by the researcher.

Data were analyzed through SPSS package.

Findings

Cultural Practices Observed and Restrictions Imposed

It was found that widows have to observe strictly some prescribed practices and the restrictions imposed on them by the society. For example we may take restrictions on food. Most of the respondents (93.1%) reported that they remained completely vegetarian after the death of their husbands. Only 6.9 per cent of the respondents said that they have not changed their food habits after the death of their husbands. It was also found that most of the respondents (93.1%) are wearing simple white sarees and no one is wearing bangles since the death of their husbands. 73.7 per cent of the respondents opined that due to a ritual compulsions we have to follow the dress code and food habits. 19.4 per cent opined that they have lost their interest in food and dressing pattern after the death of their husbands.80.6 per cent of the respondents reported that they are not allowed to attend the naming ceremony of a new born baby, 86.2 per cent of the respondents have opined that they are not allowed to go near the bride or bridegroom, 86.2 per cent of the respondents have opined that they are not allowed to enter into the marriage pendal, 61.9 per cent of the respondents have opined that they are not allowed to cook auspicious food.

Ill-treatment and Humiliation

55.6 per cent respondents reported that they were not humiliated on the pretext of death of their husbands. 30.6 per cent of the respondents have opined that they have to listen taunting and ill-treatment after the death of their husbands. 13.8 per cent of the respondents reported to be beaten and forced to starving by family members. When asked who are the persons responsible for their ill-treatment? 23.1 per cent of the respondents blamed to their in-laws. 11.9 per cent

blamed daughter in laws and 5.6 per cent of the respondents blamed to their own children.

When asked who are blaming them for the death of their husbands?, most of the respondents (31.9%) opined their in-laws frequently blaming them for the death of their husbands.

Table 2
Health Related Problems Faced by the Elderly Widows

Health Problems	*Widows N=160*	*Percentage (%)*
Diabetes Mellitus	104	65
Eye (Cataract and reduced vision)	130	81.2
Dental decay	124	77.5
Disorder in Circulatory system	70	43.8
Hypertension	84	65
Heart attack	12	7.5
Disorder in Digestive system	38	23.8
Disorder in Respiratory system	34	21.2
Musculoskeletal system and connective tissue disorder	136	65
Loss of hearing	77	48.12
Others	56	35

- Circulatory system disorder includes diseases like Angina, Chest pain.
- Digestive system disorder includes Gall Stone, Peptic ulcer, duodenal ulcer, liver problems.
- Musculoskeletal system and connective tissue disorders include arthritis, rheumatic joint pain, back pain and osteoporosis.
- Respiratory system disorder includes bronchial asthma, tuberculosis and other pulmonary disease.
- Others include general weakness, Parkinson's disease, anemia, cancer, kidney stone, dementia, burn and disability, gynecological problems.

Economic Problems

90 per cent of the respondents expressed the view that due to the increased medical expenditure we are unable to take proper treatment. Due to poor economic condition they are unable meet the basic requirement of living. 85 per cent reported that they are unable to spend on their own will and 73.8 per cent said that they do not get support from their families, 15 per cent think they are liability on the children.

Table 3
Socio-psychological Problems Faced by Elderly Widows

Problems	*Widows N=160*	*Percentage (%)*
Declining authority	124	77.5
Feel neglected	104	65
Loneliness	56	35
Difference of opinion with family members	76	47.5
Not involving in family affairs	112	70
Feel a burden to family	102	63.8
Lack of participation in outside societies	40	25
Children's disliking their presence in peer group	62	38.8
Lack of respect in the family	12	7.5
Get easily up set over issues	98	61.2

Attitude of Widows Towards Life

55.6 per cent of the respondents expressed their opinion that widowhood has changed their life completely. On the other hand 38.8 per cent reported that widowhood has changed their life to some extent. Only 5.6 per cent of the respondents have opined that widowhood has not changed their life. It was also found that 75.6 per cent of the respondents felt completely in-secure due to the widowhood. Hardly 5.6 per cent of the respondents do not feel insecure due to the death of their husbands. It was also observed that 75 per cent of the respondents are seriously bothered about their future. Hardly 5.6 per cent of the respondents are not bothered about their future.

Table 4
Suggestions for Welfare of Widows

Suggestions by Widows	*Widows N=160*	*Percentage (%)*
Re-marriage should be encouraged	62	38.8
Widow's pension for poor widows	160	100.0
Society and people should treat them well	160	100.0
Free vocational training should be given	100	62.5
Exclusive SHGs for widows	61	38.1
Provision of widow homes	109	68.1
Job reservations for widows in Govt./Private Institutions	115	71.9
Widows should be made aware of the facilities provided by the Government through Geriatric Welfare Services (GWS)	160	100

Analysis and Discussion

The sample of the widows was drawn from diverse social backgrounds. Hence the views of widows about their status and role differ. Socio-economic background, cultural practices and restrictions imposed on them, Ill-treatment and humiliations are important factors that decide the nature of the problems which widows have to face in their life.

From the data of this study it was observed that more than half of the respondents interviewed were from joint families (63.80%), while 36.20 per cent were from nuclear families. Joint families still prevail in Odisha. This might be because of the fact that Odisha still remains as one of the under developed state. In comparison to other states of India industrialization, urbanization and modernization have not flourished significantly. Therefore, social migration of youngsters in Odisha is less then other states.

It was found that 41.3 per cent of the respondents are staying with their in-laws, 21.9 per cent are staying with their sons and 13.1 per cent of respondents are staying with their daughters. Biswas's study of 13 villages in Giridih district of Bihar reports a different picture. His study was to find out the problems of aged population in India. He has reported that 88.36 per cent of aged lived with their sons. Biswas (1987)

writes "In substance, therefore, sons were the first choice for old age care, and they were often referred to as old age insurance for which property was transferred to them as premium". In India a widow can not have a separate establishment, for she is not culturally trained to lead an independent life. The elderly widow has to live with her son/sons, over whom she has no authority. A widow's life in her family and with close relatives becomes miserable, if she does not have any property. Because of these financial considerations, many widows from lower income families are not able to remain in the house of their in-laws. (Mastey, 2009).

From the present study it was observed that about half of the deceased husbands (48.8%) of the widows were land labourers. It is so because Odisha is mainly an agricultural state. Most of the people in the rural area depend on agriculture and work as land labourers.

In India, widows have been prohibited from participating in socio-religious functions because they are considered inauspicious. So most of the widows are of the view that they have been imposed of certain practices and restrictions relating to their food habits, dressing pattern, attending marriage ceremonies, naming ceremonies of the new born babies, etc., as the society conditioned them to think that their presence will bring bad-luck to bride, bride groom and new born baby. Similar findings were also observed by Patil (2000), while studying the problems of Hindu widows in Dharwad, Karnatak.

With regard to the instances of humiliation, the findings indicate that a significant number (44.4%) of the respondents were humiliated after the death of their husbands and they are supposed to be the cause of their husbands. Similar findings were also observed by The Guild of Service (2002) while conducting a study on widows of Vrindavan and Varanasi with a total sample of 240 widows in Vrindavan and 84 in Varanasi though the per cent of respondents reported humilition varies and types of humiliation being of similar in nature.

The findings of the study reveal that all the respondents have health related problems (multiple problems reported). The present findings are in line with those of Mahajan (2006) who also reported that elderly people generally suffer from general weakness and poor eyesight. Similarly, the findings of Krishnaswamy and Aghababa (2007) also support the present results who reported that ageing is a

process when deterioration of cardiovascular system takes place and bones lose their mineral content. Purohit and Sharma (1972) conducted a study of persons aged 60 years and above, numbering 521 in a group of Rajasthan villages during 1970. The clinical examination of the old people revealed that all of them were chronically ill at the time of the study. Multiplicity of diseases was normal among the respondents. Sengupta and Chakraborty (1982) carried out a study of 401 men above 55 years of age residing in the southern part of Calcutta (Kolkata). The data revealed that 75.6 per cent were found to be ill at the time of survey. 9 per cent were chronically ill and about 6 per cent were actually sick. Pathak's study (1975) is based on the post treatment analysis of the records of 1,678 patients in the age range 60 years and above (both male and female) admitted in the Medical Research Centre of Bombay Trust Hospital during the years 1970 and 1971. It was observed that a good number of patients had gone through more than one major illness in the past. The health problems in West Bengal was studied by Chakraborthy (2005) in which he found that among the elderly (60 + years) residing in a rural area neighbouring to a cosmopolitan city showed that 72.6 per cent of the elderly were suffering from chronic illness.

The main reasons for above health problems could be due to lack of proper food, stress and strain, lack of proper treatment, ignorance and neglect by the family members.

From the study it was also found that elderly widows are having economic problems They are unable to purchase medicines. They do not have money to spend freely for the fulfillment of their needs. Children consider them as liabilities on them. Lack of support from family members was reported by most of the respondents (73.8%). Indra (1963) found that the old woman maintains her status if her spouse is alive. She further reported that old women particularly those of low socio-economic status had experienced more problems and vice-versa. Majority of the aged were mainly dependent upon others even for meeting their basic needs of life.

The possible reasons for their economic problems might be that their families are not financially very sound and also price hike in medicines, treatment and high cost of hospitalization. It is worthwhile to mention that no one of the respondents of the study are covered

under medical insurance, which is the present day need to meet health-related problems.

From the study it was found that elderly widows are facing numerous socio-psychological problems like declining authority (77.5%), loneliness (35%), neglect by the family members (65%), differences of opinion with family members (47.5%), lack of participation in outside societies (25%) and feeling of being a burden on the family (63.%). Mahajan (2006) also supports the present findings, who revealed that elderly suffered with various socio-psychological problems like; loneliness, declining authority, lack of respect, strained family relations. Further, it was reported by him that proportions of females is more than that of males who suffer from these problems. Similarly Bakshi (2007) also reported that aged females living with families were feeling emotionally unstable. Sijuwade (2008), in his study have observed that almost half of the respondents (48%) reported that their families do not take care of them and neglect physically, economically and emotionally.

From the findings of the study it was observed that there exists an association among the age of respondents and selected socio-psychological problems. This might be due to change in family structure from Joint to nuclear and too busy routine of the children or may be modern generation do not feel any responsibility for their care and elderly feel lack of social interaction within and outside the family. The present findings are in line with that of Bhattacharya and Birla (2006) who have pointed out that changing pattern in family structure and too busy routine of young generation leave their elderly under stress.

It was also observed that the widowhood has changed the life of the respondents (94.4%). Also 75.6 per cent of the respondents feel completely insecure after the death of their husbands. Widowhood also brings about a variety of social and economic problems such as poverty, unemployment, illness, family disorganization and women's insecure status (Phelps: 1983). Widowhood itself a problem of many dimensions, numerical – financial – emotional (Kelphart: 1981).

With regard to the suggestions given by the respondents for the welfare of widows, the findings suggest that a majority (62.5%) of them state that free vocational training should be given to the widows

in order to make them self-reliant. 38.8 per cent of the respondents (mostly urban respondents) favour the remarriage of widows and 61.2 per cent of the respondents (mostly rural respondents) are not in favour of re-marriage of widows. Due to strong hold of socio-religious mindset of the respondents, remarriage of the widows is not favoured.

It is concluded that the state of widowhood is a great calamity in a patriarchal and traditional society like India and patriarchy has played the biggest role in the total marginalization of widows. As widows, women suffer some of the most severe subjugation of their whole lives. Widowed women are harassed, abused and denied land and livelihood.

Government of India has launched various schemes and policies for older persons. These schemes and policies are meant to promote the health, well-being and independence of senior citizens around the country. In December 2007, Government of India made an act-Maintenance and welfare of parents and senior citizens Act 2007. It is expected from the central and state governments of India to implement these provisions so that widows are not abused and neglected and may lead a quality living in the last phase of their life.

Notes and References

1. For the present study data were collected at Lord Jagannath Temple, Puri, the Pilgrim city of Odisha in the month of Kartik (From 4th October 2009 to 4th November 2009, from Kumar Purnima to Kartk Purnima). Kumar Purnima is the full moon day in the month of October (Aswina) and the beginning of the month of Kartik. This autumn festival is one of the most popular and important festival of Odisha.

   Thousands of devotees, mostly old and widows used to throng the pilgrim city of Puri to observe the month-long "Kartika Brata". They used to take bath early in the morning and rush to Jagannath Temple to witness "Mangal Arati" and spend most of their time in chanting "Kartik Mahatmya", a religious text. They take one vegetarian meal a day (most of them depend on cooked "Mahaprasad" from temple kitchen) and worship the holy Basil tree as the image of the Lord. The last five days of the month is

called "Panchuka". It begins on Ekadasi day during the Shukla Paksha in Kartik month and ends on Kartik Purnima. This 'Panchuka' is considered to be the holiest days of the month. The Lords used to take five different new ''Veshas''(attires) each day. The ''Kartik brata'' concludes on the "Kartika Purnima day" with the devotees taking holy bath in 'Pancha Teerth' before darshan of the Lord Jagannath.

In the month of Kartika, thousands of widows from various corners of Odisha, irrespective of rural and urban areas used to congregate in Jagannath Temple, Puri to observe "Kartik Brata". Hence the data were collected inside the temple premises.

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Disengagement or Re-engagement in Later Life? A Study of Old Age Home Residents of Orissa

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ABSTRACT

The gerontology literature emphasises that social engagement is indispensable for successful ageing. This paper attempts to examine the viewpoints of the old age home residents towards issues of disengagement from various roles and the different strategies adopted by them to further re-engage themselves socially. The paper is based on a study conducted in six old age homes in four districts of Orissa. The study shows that the residents not only believed in disengaging themselves from familial roles but also most of them had withdrawn themselves from family responsibilities. Further, they devoted themselves to religious affairs. They re-engaged themselves in various activities in the Homes, which helped many of the residents maintain their physical and mental health.

Key Words: Elderly; Hinduism; Old age home; Orissa; Social engagement/Disengagement.

There is a growing recognition that social engagement is important for successful ageing (Mendes de Leon 2005). But do all elderly persons subscribe to this view? Do elderly attach positive meaning to remaining active in old age? Within the framework of Hindu cultural tradition, the elderly persons are encouraged to

disengage themselves from various familial and societal roles in their later years (Vatuk 1980). Particularly in the context of the *ashram* scheme of life, the last two stages of which deals with old age, the elderly are expected to transfer their family responsibilities to the adult children and leave home to pursue religious activities in order to attain *moksha* or salvation, i.e., freedom from the cycle of births and deaths (Hiebert, 1981).

This normative model for the ideal life cycle is one, which, at least, in its broad outlines, is familiar to Hindus of all social levels. It would be interesting to look at the way elderly in contemporary India interpret the Hindu cultural ideal of disengagement in old age. This paper attempts to examine the viewpoints of the old age home residents towards issues of disengagement from various roles and the different strategies adopted by them to further re-engage themselves socially.

The disengagement theory states that individuals, as they grow old, gradually withdraw themselves from social interaction (Cumming, 1963). They prepare for death by isolating themselves from societal roles. This is a mutual process in the sense that both individuals and society withdraw from each other. On one hand, individuals lessen the number of roles they play in society and on the other hand, society relieves the old people from normative control and structural restraint. This process is functional both for the individual and society. While the elderly disengage from roles honourably without being forced by society to do so, society frees the elderly from roles they once occupied and inducts younger people to fill in these roles. Disengagement is universal and inevitable though 'variation in timing and style may occur according to the individual's physiology, personality, initial type of engagement and life situation' (Hochschild, 1975).

The theory of disengagement is closely related with the *ashram* scheme of life. The last two stages of the *ashram* life deal with old age. In the third stage, i.e., *vanaprastha* is the stage of 'dwelling as a forest hermit' when the householder with or without wife unfastens his social and familial ties with the children and other family members and embarks on a spiritual is marked by sojourn away from the community (Vatuk, 1980). The last stage, which is known as the period of *sannyas* is marked by austere living and complete forgoing of

worldly activities (Ibid., 1980). The elderly persons at this stage discard all attachments to other human beings and spend their time in meditation and spiritual pursuit. The Hindus may not strictly follow this normative order of stages of life but they are invariably aware of it and this has a definite impact on their lives as 'men and women tend, for example, to assess and evaluate their own lives and the lives of others in its terms, and they judge the appropriateness of various forms of activity and outlook at particular phases of the life cycle accordingly' (Ibid., 1980).

Hindu scheme of life for the elderly holds importance in the context of this study because the author has investigated the perception of the residents of the Homes towards withdrawing from familial roles and their absorption in religious activities. The author also sought to find how far the Indian elderly conform to the stages of life as laid down in the *ashram* system.

The activity theory of ageing is another theory, which is quite relevant in case of present study. The activity theory of ageing propounds that engaging in some kind of activity or work facilitates elderly people to adjust to the later years of their life (Fennel *et al.*, 1988). Activity theory is essentially a theory of successful ageing. It is based on the premise that the social and psychological health of a person improves through continued activity in a variety of roles. Havighurst who put forward this theory contends that there is a positive correlation between activity, mental and social adjustment. He holds that the role crisis created by retirement is overcome by absorbing new roles. He calls this role flexibility. He defines it as 'the capacity of personal quality to change roles easily and increase or reduce activity' (Fennel 1988).

In other words, people cannot be happy unless they stay socially active. People, after retirement, try to fill in their vacant time by engaging in some kind of activities. High degree of activity in a given social role is positively related to happiness and good social adjustment. They help in maintaining the mental and physical health of the elderly. The social policy implications of this perspective are rather more positive than disengagement theory as it suggests that morale and life satisfaction of individuals are linked to their social integration and high involvement with social networks (Chadha 1997). In this study, it is examined what strategies are adopted by the

elderly residents who have disengaged themselves from familial roles to reengage themselves in Homes and whether remaining in these activities help the elderly residents to adjust to the Homes and increase their life satisfaction.

Objective

The paper examines if the elderly staying in old age homes (Homes hereafter) believe in the Hindu cultural prescription of withdrawing themselves from familial responsibilities. If so, how did the process of disengagement from social and familial roles take place in their lives? The paper also examines if they attach positive meaning to remaining active in old age? If so, what strategies have they adopted to re-engage themselves in Homes.

Method

Sample of the Study

There were thirty old age homes in Orissa (at the time of research), out of which, six Homes were chosen. These six Homes were located in four coastal districts of Orissa. The coastal districts are Puri, Khurda, Ganjam and Jagatsinghpur. Out of the six Homes, four Homes were run by the government with the help of NGOs and two Homes were run by the Christian missionaries. From these six Homes, 55 residents were interviewed using convenience sampling.

Tools of Data Collection

The author employed primary data for the purpose of this research. A semi-structured interview schedule was constructed to tap the subjective perception of the residents of the Homes in Orissa. The semi-structured interview schedule has both open and closed questions. The author also made use of the observation method whenever possible which yielded results untapped by the interview method.

The author interviewed the residents, who were willing to speak and who were able to spend one to two hours for the interviews. Further, those residents were interviewed, who were not indisposed and who were not seriously ill at the time. Since many of the residents of the Homes were ill or physically immobile or too old to speak for

long periods of time or would not remember anything, it was not possible to interview equal numbers of residents from all the Homes.

The staff of the Homes were also interviewed. The author had informal discussions with them regarding the functioning of the Homes, their opinion about the residents of the Homes and their assessment of the perception of the Home residents towards the staff and the working of the Homes.

Findings and Discussion

Marital status: The marital status of the residents showed that 46 residents were married whereas nine were single. There were 25 residents who were childless. The data further showed that of the 46 residents, who were married, most of them were widows or widowers. The number of such residents whose spouses were dead was 35. This feature was also found by Dandekar in her study of the residents of Homes in Maharashtra, where a majority of the residents of the Homes studied were widows or widowers (Dandekar, 1996:137–38).

Education: The educational background of the residents (See Table 1) showed that the majority of the residents were illiterate. Only 16 residents had been to primary school. There were just five residents who had completed secondary school. Only one person was a graduate while another one had attended high school. If the educational background of the residents among the various Homes is compared, there were more illiterate residents in the Homes run by the Christian charity organisations. When the male and female residents were compared, the numbers of female residents (18) were slightly more than the male residents (14).

Table 1
Educational Background of the Residents

	Education	*Illiterate*	*Primary*	*Secondary*	*High School*	*Graduation*	*Total*
All Homes	Frequency	32	16	5	1	1	55
	Percentage	58.2	29.1	9.1	1.8	1.8	100.0
Government Homes	Frequency	22	13	5	1	1	42
	Percentage	52.4	31.0	11.9	2.4	2.4	100.0
Christian Homes	Frequency	10	3	–	–	–	13
	Percentage	76.9	23.1	–	–	–	100.0

Occupation: The occupational background of the residents indicated that the majority of the residents were in the unskilled private sector (Table 2). There were 15 housewives in the sample. The number of people in the skilled private sector was four. While five residents were farmers, three residents had their own businesses. Only one resident was unemployed before coming to the Home. The occupational status of the residents of the Homes run by Christian missionaries showed little difference from the government run Homes as most of the residents interviewed in both types of Homes were engaged in the unskilled private sector.

Table 2
Occupational Background of the Residents

	Occupation	*Unskilled Service Private Sector*	*Skilled Service Private Sector*	*Own Business*	*Farming*	*Unemployed*	*Housewife*	*Total*
All Homes	Frequency	27	4	3	5	1	15	55
	Percentage	49.1	7.3	5.5	9.1	1.8	27.3	100.0
Government Homes	Frequency	19	5	3	5	–	11	42
	Percentage	45.2	9.5	7.1	11.9	–	26.2	100.0
Christian Homes	Frequency	8	–	–	–	1	4	13
	Percentage	61.5	–	–	–	7.7	30.8	100.0

Disengagement

The author asked a series of questions to the residents to see what they thought about disengagement from social and familial roles in old age, if they believed in withdrawing themselves from property control and from decision-making in the family, when they thought it was appropriate to disengage from these spheres of life and what had happened in their respective cases. The answer to such questions could lead the author to establish a relationship between *ashram* scheme and its impact on the elderly Indians.

A majority of the residents (38) that one should disengage from property matters in the family during old age. While four residents said that one should not disengage oneself from controlling property in the family, 13 did not answer the question.

Similarly, a majority of the residents, i.e., 70.9 per cent (39 residents) felt that one should disengage from decision-making in the family during old age. Just three residents said that one should not do it at any stage. The rest of the 13 residents did not answer the question.

Probable Time of Disengagement: The response to probable time of both forms of disengagement varied. But, in both cases, the number of residents who spoke of a particular time or occasion for such disengagement was more or less the same. As many as 11 residents in both cases felt that one should withdraw from these spheres of life once the children got married. More or less equal numbers of residents in the case of disengagement from decision-making in the family felt that one must isolate oneself when one became incapable of managing household matters on one's own.

A few residents talked of different age ranges such as the age of 50, the age of 60 and the age of 70 as a phase when one should begin to turn oneself away from family affairs. There were four residents who said that when one thinks that children have become responsible enough to shoulder responsibilities, then it is the time to hand over the family reins. In both cases, one resident answered that one should withdraw oneself from decision-making and property matters when children become responsible and parents find it difficult to manage household matters due to their advancing age. A large number of residents (20) did not answer the question in both the cases.

Actual Practice: The author also asked the residents what had happened in their particular cases in matters of property. As many as 34 residents said that they did not own any property at all. Another six residents said that they had divided the property amongst their children. There were six residents who complained that others forcefully occupied their respective properties. While one resident maintained that he still retained his property, another resident replied that he had given it to his brothers. There were seven residents who did not answer this question.

Similarly, the residents were also asked where they stood as far as their say in family decision-making was concerned. Apart from 25 childless residents who did not have to answer the question, 21 residents admitted that they did not have any say in the family decision-making and their suggestions were always ignored. Another three residents held that they did not interfere in the family matters of

their children. A couple of residents said that since their children were staying away from each other and from them, the question of involvement in family matters did not arise. One resident maintained that his only child was a daughter who was married and he did not stay with her family. He did not intervene in their family matters. Three residents did not answer the question.

Gender Comparison: When the gender differences and similarities regarding voluntary disengagement were taken into account, it was found that the majority of the male and female residents felt that one should disengage themselves from family responsibilities during old age. But their opinion with regard to the probable time of disengagement from handling family responsibilities such as managing family property and the decision-making in the family varied. While most of the male residents felt that one should withdraw oneself when one becomes physically incapable of handling the family responsibilities, many of the female residents felt that children's marriage was a stage when the family rein should be handed over to children. Moreover, majority of both the male and female residents did not hold any property themselves. They did not have any say in the decision-making of their families as well. While four male residents complained that their properties were forcefully occupied by others; properties were taken away by others in the case of two female residents.

A related question to disengagement from family matters was whether focus on religious activities was necessary in old age. The number of residents who replied affirmatively was 46. Apart from four residents who did not answer the question, five residents said it was not necessary to focus on religious activities in old age.

The residents of the Homes were further asked to mention their ideal place for pursuing religious activity. While 24 residents held that one could devote oneself to religious activities wherever one was staying, another 22 residents opined that one could engage in religious pursuit anywhere. For them, there was no particular place to pursue religious activities. A couple of residents thought the Homes were the right place for engagement in religious activities. Just one male resident maintained that one's home was the best place for it was surrounded by family members. There were five female residents did not answer the question.

The series of responses to the set of questions pertaining to disengagement from social as well as familial roles combined with queries on further engagement in religious activities indicated that the residents did believe in disengagement from both societal and familial roles. They also exhibited more interest in religious activities in old age. But when they were questioned further about their personal experience regarding the transfer of property or role in family decision-making, their response revealed that the transition had not been smooth at all. For instance, though the residents believed in withdrawing from family matters, in many cases I found that they did not actually have any say in family matters in old age. Their suggestions and inputs to family decisions were ignored by their children.

Most of the residents do not own any property at all. In some cases, others forcefully occupy their land and house. Then, in the context of religious involvement in old age, it was found that the majority of them believed in pursuing religious activities vigorously in old age. But, unlike traditional thought that one should go to religious centres or sacred places to engage in such pursuits, the residents opined that one could engage in religious activities anywhere or wherever one was staying. It was found that the majority of the residents of the Christian run Homes expressed ignorance about disengagement from family decision-making and property matters. They could not tell the suitable time of such withdrawal from family affairs. Like the residents of the Homes run by the government, most of the residents from Christian run homes had no property at all. Moreover, number of residents without any child was higher in Christian run Homes; hence the question of disengaging from family responsibilities did not arise.

But residents of both types of Homes felt that one should devote more time to religious activities in old age and that it could be pursued anywhere. Overall, though the theory of disengagement held true in this study, there were interesting variations in the Homes studied. The idea was not only to seek views of respondents on topic of familial disengagement and further reengagement in other activities but also to understand what has actually happened in case of each of these respondents which provide a comprehensive understanding of linkage between the theory and practice of disengagement.

Related Work: Sylvia Vatuk conducted a study in Rayapur, a suburban village near Delhi, between 1974 and 1976 to test the theory

of disengagement within the framework of the Hindu *ashram* system (Vatuk, 1980). She looked at the relationship between the normative order of *ashram* theory and actual behaviour pattern of people in their old age in an Indian village.

Vatuk found that people began to perceive themselves as old when their sons were married and grandchildren were born. The elderly people tended to entrust the household responsibilities to their sons and daughters-in-laws at this stage and opted for leisure and rest. For most of the elderly, old age meant comfort and care. Among the elderly, there was a positive connotation of dependency since it was socially expected that the young would take care of the old both financially and health wise. The older members of the village responded that they had turned over the familial concerns to their adult children.

But a closer examination by Vatuk revealed contradictory features. She observed that the elderly males and females were quite involved in household matters well into their later years. It was only when their health declined, forcing them to hand over the familial management to their sons and daughters-in-law, that they withdrew themselves into peripheral positions.

She argued that elderly parents surrendered the power and resources to their adult children to avoid possible intergenerational conflict. She noted, 'Withdrawal, expressed as a voluntary choice and buttressed by cultural prescription then becomes a graceful way giving in to the reality of a power relationship whose balance has already tipped against them' (Vatuk, 1980). The study also pointed out the differing conceptions held by the elderly and the cultural ideal regarding old age. While the *ashram* system conceived an active spiritual life, independent from family and community, the elderly of the village believed old age as a time for rest, comfort and dependency. Though the elderly acknowledged the cultural notion of spiritual disengagement, in reality they found it difficult to emulate it.

Another study made on similar lines, explored the different strategies adopted by the elderly to react to Hindu cultural prescriptions for old age. This study was conducted by Paul Hiebert (1981) in Konduru village, Andhra Pradesh in 1963–65 and again in 1974–75. He selected 200 Hindus of 50 years and above for his fieldwork. He observed that the daily lives of the elderly revealed different patterns of response to the normative order of *vanaprastha* and *sannyasa*

periods of the *ashram* scheme. He broadly categorised these response patterns into five types.

The first strategy was the reinterpretation of rules where the elderly, instead of renouncing worldly activities for a life of religious mendicancy, preferred to practise meditation at home. They justified their act by quoting scriptures where the s*annyasa* stage was charted out as a metaphor, which need not be practised literally. One could devote oneself to religious pursuit at home by giving up material pleasures without having to shun family bondage. The elderly, falling into this category, subscribed to 'mental mendicancy.' The second strategy was the manipulation of rules. Hiebert cited the instance of a case where the person concerned became a *sannyasi* to escape his dominating wife and family bickering. The person came back after some time, continued his ancestral occupation and took a mistress from a lower caste. This, the author argues, was a case of manipulation of the rules laid out in the Hindu scriptures.

There were people who adopted the strategy of alternative rules. They chose to devote themselves to the service of mankind and God and to try to gain wisdom. They felt that by committing themselves to a life of selfless love and service they could attain salvation. The strategy of non-participation involved a lack of interest in religious matters and going ahead with one's daily life. The last strategy observed by Hiebert was what he called 'no-strategy bind.' The elderly people, particularly from the lower castes, were least bothered about life during old age and the after life. They were just engaged in making a living by working hard regardless of the consequences. This study showed the variety of responses of the common man in India to the Hindu scheme of life, particularly at the later stages and how the elderly constructed old age vis-à-vis the *ashram* system.

While in Vatuk's study, the residents said that the marriage of sons and the birth of grandchildren was the time for disengagement from managing household matters, the residents in the present study replied that the children's marriage is the time for disengagement from managing property matters and decision-making in the family. Some other residents said that when a person becomes incapable of managing household affairs, then it is time for withdrawal. Vatuk also found in her study that the elderly did not give up their family reins till they had become physically incapable. In this study, as has been

mentioned earlier, the transition was not always smooth. In most cases, the elderly did not have a say in the decision-making in the family. They were never consulted by their children in family matters. Most of the residents in this study said that one should devote more time to religious activities in old age.

When the residents of the Homes were asked where one should devote oneself to religious activities, the majority of them replied that one could pursue religious interests anywhere or wherever one was. This was perhaps similar to what Paul Hiebert termed 'mental mendicancy' (Hiebert, 1981). He found that the villagers did not strictly follow the scriptural ideals but reinterpreted them in the sense that a section of the villagers chose the path of abstract meditation at home surrounded by family members, arguing that detachment was possible in any situation and context.

In an earlier study of Home residents in Kanpur (Mishra, 2002), the author found that the residents led a satisfactory life and did not feel lonely because the residents were made to realise through sermons that they should not feel lonely and crave the presence of family and friends, but engage in religious activities and any other work that interests them. Neither did the residents sever contact with their family members nor did they go to sacred places to pursue religious interests. Instead they stayed in the Home and followed partial disengagement.

Activity

The residents were absorbed in a variety of activities in the Homes like gardening, helping the staff in cooking and managing the accounts of the Homes. They felt quite happy involving themselves in these activities and it also improved their self-esteem. But there were residents who did not do anything or could not do anything due to poor health but still were content with life. It was largely because since the Homes were taking care of their basic necessities and since they had nowhere to go.

The residents not only believed in disengaging themselves from family roles but also most of them had withdrawn themselves from family responsibilities. Further, they devoted themselves to religious

affairs. They strongly believed that old age is the time meant to devote to religious pursuits. Most of their times at Homes were spent in prayers, listening to devotional songs and visiting places of religious worship. They re-engaged themselves in various activities in the Homes, which helped many of the residents maintain their physical and mental health.

Lennartson and Silverstein (2001) studied the linkage between engagement in activities with survival chances of 537 of the oldest-old in Sweden. They divided the activities into social, leisure and productive activities, which contained activities like mutual visits of residents and friends, going to movies and cultural events, eating at restaurants, reading books, newspapers, solving crossword puzzles and working in gardens (Lennartson and Silverstein, 2001).

From their study, they inferred that among men, activities that were both solitary and active (gardening, carpentry, engaging in hobbies, etc.) were significantly associated with reduced mortality risks. Among women, none of the activity domains was significant. But among the entire sample, greater participation in solitary-active activities significantly curtailed the risk of mortality.

They developed a positive view of ageing which enabled them to cope with life in advancing years. Wurm *et al.* (2008) also state that a positive view on ageing results in an optimistic approach to life and it positively affects the subjective perception of health. Such positive beliefs are known as psychological resources that contribute to the elderly's resilience.

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Santhali Aged in a Semi-Urban Set-Up: Chunukoli – the Village Under Study

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ABSTRACT

The paper presents a picture of the life of the aged in this Santhal community who migrated from the Maurbhanj district of Odisha to the village Chunukoli near Bhubaneswar. The focuses on the problems santhali aged face and some suggestions have been made to improve the quality of life of the santhali aged in this particular village-Chinukoli.

Key Words: Santhali aged, Health, Pension schemes, Care.

While the economically developed countries are already pre-occupied with issues emerging from the aged of their population, the developing countries must start immediately to give due consideration to such issues if they have to avoid serious problems in the near future. With a large population only next to China, India has to give serious attention to the issues relating to aged population. The size of the aged population in India increased from 20 million in 1951 to 57 million in 1991, 80 million in 2001 and expected to be 107 million in 2010, 198 million in 2030 and 326 million in 2050 (United Nations, 1995). A majority of the population will be living in rural India. In Indian society, the cultural values and traditional practices emphasize that the elderly members of the family be treated with honour and care. The tribal communities of India are no exception to it. The

families of tribal communities are also expected to ensure the needed care and support for the age.

A study by Nair (1989) of 745 persons aged 60+, 375 men and 37o women from rural areas from four districts in the state of Karnataka, investigated their socio-economic and health problems. Joseph (1991) made a comparative study of 411 persons, 207 men and 204 women living with 60 families in Kottayam distract in Kerala. Joseph identified stereotypes of aged, attitudes of the young towards them, their problems including health problems and their personality and religiosity. In a study of aged in Kerala Rajan in 1989 described factors contributing to ageing, changes in the age composition, dependency ratio and structural changes. In an analysis of the status of aged (65+) in south Asia, Martin (1990) presented their characteristics, including their health status, investigated the changes in their family situation and status, speculated about their future, and discussed general ageing policy issues and research needs. A study by Chanana and Talwar (1987) dealt with the growth rate of the aged population in India, the dependent population in the non-reproductive age groups, the old age dependency ratio, sex ratio, marital status, literacy among males and females, and working and non-working aged.

The present paper attempts to present a picture of the life and the problems santhali aged face. In order to understand the real problems of these Santhali aged, the study focuses on three main aspects of Santhali life, viz., health, socio-economic and political activities. The paper also presents some suggestions to improve the quality of life of the Santhali aged living in the village-Chinukoli.

Method

Sample

Chunukoli, the village under study is a rehabilitated village of Santhals, is situated about 22km away from Bhubaneswar. Infosis campus is adjacent to it and the village comes under Chandaka police station. Nandan kanan – the wild life sanctuary and zoo is just 13 km away from Chunukoli village.

The total population of the village is 548 of which male female ratio is 312:236. As far as aged are concerned, total aged are 159(above 50 years of age) in number. Aged males are 80 in number while aged

females are 79 in number. (Table 1). All aged people of the village are married out of which there are 08 widowers and 15 widows (Table 2).

Table 1
Age Distribution of the Sample

Age	*Male*	*Female*
51–55	10	20
56–60	13	19
61–65	15	12
66–70	14	10
71–75	11	08
76–80	10	06
81–above	07	04
Total	80	79

Table 2
Marital Status of the Sample

Marital Status	*Male*	*Female*
Married	72	64
Unmarried	nil	nil
Widow/widower	08	15
Total	80	79

Coming to the occupational status of the sample studied, all are/were daily laborers and among them two are medicine men of the village while five old women serve as mid-wives (dhais) within the village premises. As regards the educational status, only 2 old males know writing their own names, we may call them as literate while others are totally illiterate. No female knows writing or reading. Thus, we can say the educational status of the Santhal aged in this village is almost nil.

Most of them being illiterate, data were mainly collected through interview schedules. Observation (both participant and non-participant), focused group discussion and case study methods have also been employed to make the data more comprehensive. Secondary sources of information have also been incorporated.

Findings

Socio-economic Role of Santhali Aged

No doubt, Santhali elderly of Chunukoli are very poor and below poverty line, and are not fully productive, still they engage themselves in different partially productive activities during day hours. Though they mostly work as daily laborers in agricultural sector and in construction sites, these Santhalis are well acquainted with carpentry. They make beds (khatia) and small tools with cotton chords for local use and also sell those for earnings. It was found that out of 62 old men within the age of 70, 42 about (62%) spare little or more time in carpentry and earn some money. People between 51 to 60 work for daily wages if they don't have any major health problems. Aged females are mostly left at home for the job of making handia-the home made country liquor. Handia is used both for local people and also sold out for earnings. About 75 per cent female aged work as labourers while only 11 per cent stay at home strictly to look after the children and don't go for outside work due to old age.

Both males and females enjoy going to nearby forests to collect fire woods and edible roots . Collected woods are then cut into small pieces, made into bundles and sold out in local markets. In this way Santhali aged in Chunukoli village do not sit idle at home and are in no way stand as barrier to their families or the society as a whole.

Role of Aged in Political Activities

Aged Santhalis of Chunukoli especially the males enjoy special political status in the village. The village panchayat is headed by the eldest male member called Baina while most aged males are members of the panchayat. All important meetings of the village are conducted in the presence of these members and final decisions are taken accordingly. Opinions and advices of seniors are taken into consideration with due respect and obeyed by one and all. Though not involved in active politics, they take active part in all elections be it panchayat, assembly or parliament election. They play prominent role in deciding the fate of political contestants. In case of inter village dispute, inter family dispute and also in disputes of land and riots, the aged play vital role in resolving the conflicting situations. Thus, Santhali aged are considered as the "backbone of the community"

Aged and Their Health

It is a fact that in order to assess the health status of any individual or community, some expert knowledge of health and hygiene is necessary. But here in this village, one can easily study the health status of the aged outwardly. They all look weak, withered and sick. It was found that out of 80 males, 65 (82%) suffer from vision problems, 64 have arthritis problem (80%), 2 have heart problem, and 3 have mental problems. Besides these, common problems like cold, cough, eczema, skin diseases, diarrhea, dysentery are very common among the old. Women are in a better state as far as health is concerned. 50 per cent (40) women have visionary problems while 42 per cent (52) have arthritis and 3 have serious back problem. No case of gynic problem is found though cases of cold, cough, eczema, dysentery, diarrhea and skin diseases are rampant. As Santhalis mostly believe in ethno-medicine, the local medicine man called OJHA plays a great role in health related activities of the villagers. There is no PHC within the village premises. People have to walk at least a distance of 4–5 km in case of serious illness. Being at close proximity to the capital city Bhubaneswar, health camps are organized by both government and NGO sectors, especially for the old people and free medicines are also distributed and people are invited for free consultation, still, people do not prefer this way of treatment because there is no regularity in these free camps and doctors are not available at the time of need. There is also psycho-fear in having allopathic medicines which at times gives them side effects.

Handia

Most interesting aspect of Santhali health is the regular intake of handia – a local made country liquor. It is a home made liquor prepared out of left over rice mixed with water locally called as TURANI. It is not only used for relaxation or rejoice, it also works as wonder in case of any type of common illness-both mental and physical. It is used as a health drink by one and all in this village. All the aged are addict to it and ignore minor illness if handia – the magic drink is with them as it is considered as the ultimate medicine for all health hazards and mental problems.

Case Study–1

Bikram Soren (Village Medicine Man) is a man of 70 years old and is a father of two daughters. His first wife is dead and he got married

second time who has no issue. Both his daughters are married Bikram is now staying with his second wife. His younger daughter is staying in his front door and can look after his father. Bikram commands high respect from the entire village as he was the only medicine man in the entire village few years back. Now, at his 70s, his vision has gone down so mobility has been restricted by his wife. His wife at her 50s goes to construction sites for earning. His younger daughter also leaves her baby with Bikram and goes for work. At this age Bikram largely depends upon Handia – the local drink which is prepared by his wife at every night. Handia is used as a common medicine by all grown ups in the village. Even, Handia is used as a food and taken thrice daily by the old people of this village. Bikram takes Handia as food, as medicine and above all for all pleasure and pain. Bikram feels sorry as he is totally dependent and does not get any help from Government side. His stature in the village is still high in the village because santhalis respect medicine man a lot and that is why Bikram still commands respect from the people in the village.

Case Study–2

Mardini Soren (The Old Mid-Wife) is a widow in her 70s. She was married at an early age of 15 while her husband died of snake bite after two years of her marriage. Her second husband left her eloping with another girl after five years. Her third marriage also did not last long. She is staying all alone collecting fuel wood from the forest. But she being the mid-wife of the village, does the work of delivering babies of pregnant women. There is no fixed charge for any delivery, whatever is offered to her is accepted by her. Even at this age, she is wanted by most expectant mothers for safe delivery. Gradually she started developing health complications like arthritis, vision problem and also asthma (breathing) problem. As she is all alone, no one is there in her family to take care of her and her age does not allow her to work any more and now she lives in utter poverty and in terrible pain. Unaware of BPL card and old age pension, she is not in a position to approach any body and thus, her trauma has gone unnoticed.

Conclusion

The care and support for elderly population in any community is an important issue. The government of India has expressed its concern in this regard by preparing National Policy on the older persons and

by constituting a National Council for the Older Persons (NCOP) to look after the implementation of the policy. Both the central government and state governments have introduced a number of schemes to provide care and support to the elderly. The NGOs are also undertaking the work of taking care of the aged in different ways. Santhalis of Chunukoli, though not very ill treaded by their family members are forced to work in old age due to severe economic compulsions. It is, therefore, necessary that efforts should be made to provide the aged their due pension and other benefits timely and properly so that they will neither be any burden on their family members nor be forced to work for earning in spite of their old age problems. Also, care should be taken to see that there is a strong family support for taking care of the aged people in each and every family, of the society concerned.

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DIRECTIONS TO AUTHORS

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