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Promoting Active Ageing Through the Use of ICT: From Global and Indian Perspective

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ABSTRACT

With the advent of science especially in the areas of medicine and physiology the average life expectancy has been on the rise since the past few decades. This, along with decreasing infant mortality rate, has led to an increase in the elderly population all over the globe. With a thriving elderly population the concept of active ageing has gained traction in the last few years and modern society has found widespread application in this area. Not surprisingly, active ageing has benefitted largely from use of Information and Communication Technologies (ICT). It has profound implications in educational institutions, labour markets, social justice, medical care, long term care and relationship between generations. With the ever growing popularity of nuclear families, the condition of the elderly population seems to have taken a backseat in recent years. With children moving away for the sake of careers the older generation finds itself under the care of professional agencies which provide a kind of social security but do not really provide any sense of "activity" to nourish the mind. To address this problem, the theory of active ageing aims to include better opportunities for people to continue working as they grow old and contribute to society in some way or the other. Active ageing has found many

advocates whose policies tend to improve individual quality of life. This paper presents the current situation of market in Europe and United States where active ageing through ICT is already an established concept. Further, a brief overview of the market situation in India has been discussed along with further scope of implication in this sector.

Key words: Active Ageing, Quality of Life, Telecare

From its very inception, studies on ageing have not only provided description and mechanisms of ageing phenomenon, but have also enhanced the reservoir of existing knowledge required for the change in living situation of the old which would positively affect their ageing process. They have influenced policy decisions of both the private as well as the government sectors since the first world assembly on ageing in 1982 to the first global consensus on providing dignified care of the elderly in the form of the Madrid International Plan of Action on Ageing (United Nations, 2008) in 2002. The concept of "active ageing" refers to the method of ageing by which people maintain a high quality of life as they age, ensuring that they not only receive passive help from the society but can also engage in its activities. One of the basic challenges of research on ageing concerns the question whether active ageing (Tesch-Roeme, 2012), is possible and if so, which factors enable individuals, social groups, and societies to grow older healthily and actively. Three highly important domains on quality of life need to be considered regarding any discussion on active ageing: health, social integration, and participation. Active ageing is normally synonymous to successful ageing. Successful ageing in general includes three main components: low probability of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement with life. For successful implementation of active ageing the following basic requirements have to be fulfilled.

Early Awareness of Active Ageing

Active ageing should incorporate diverse aspects of life (even before seniority is attained) such as volunteering in childhood and adolescence and education and healthy behaviour. Of these, education has the greatest effect visible in old age.

Offer Opportunities for Active Ageing Also Later in the Life Course

Lack of energising social integrand and stimulating volunteer activities are prime examples of vanishing active ageing investment even in middle and late adulthood. Even though studies show that changes in health and participation are possible up to late adulthood, the changes are practically growing obsolete. Moreover, efficiency of interventions decreases as one grows older. It is therefore the responsibility of the respective authorities to provide life-long health education for the aged along with sustainable environment for everyone, irrespective of their age.

Improve Societal Frameworks for Active Ageing

Active ageing needs a secure base. Health and participation in late life can be fostered by societal frameworks. Results from comparative surveys (United Nations, 2005), show that the extent of welfare state support – through social security systems like unemployment allowance, pension and prolonged elderly and medical care system – seems to be connected to opportunities for active ageing. Although the instruments for building social security differ between societies, governments may provide regulation for the combined effects of different stakeholders. Highly relevant is the prevention of poverty, as poverty bears the high risk of social exclusion. Combing poverty will also help to reduce health inequalities and increase the chances to take an active part in society.

Pay Attention to Images of Ageing

Societal and individual conceptions of ageing influence developmental trajectories over the life span. The societal images of ageing have a profound impact on proper utilization of the potentials of active ageing dealing with the restrictions of frailty and dependency in old age. Inflicting new "images of ageing" into the consciousness of the general public might show that older people are a potential societal resource. It should be noted, however, that purely positive images of ageing do not do justice to frail, old people in need of care. Hence, images of ageing should be inclusive and embrace both potentials and risks of old age.

With the recent developments and breakthroughs in portable communication technology and computing systems, Information and Communication Technologies (ICT) has been given a central role to play in the advancement of active ageing. Due to varying levels of importance attached to the development of these new technologies by the policy-making bodies of different countries, ICT has faced different challenges and achieved different levels of penetration as we will see in the following section.

Situation of the Market in Europe and Beyond

The general background to this study was derived from the trend towards an ever increasing ageing population (United Nations, 2012) and this has been observed across Europe and beyond for some time already. For Europe and many other countries around the world, the on-going demographic development has significant socio-economic implications: in the future, there will be more older people both in numbers as well as in percentage of the population. The very-old section will particularly experience a boom, there will be a decrease in their family support system, and there will be a smaller productive workforce to contribute to the creation of economic wealth as well as to the financing of health and social services in particular.

During recent years, the social and economic challenges connected to these developments have received increasing policy attention. In this regard, the potential offered by Information and Communication Technologies (ICT) is of paramount importance in order to cope with them in an efficient manner. Recently, the European Commission has adopted an Action Plan on Information and Communications Technology for Ageing where it is highlighted that better utilization of the potential provided by ICT for independent living in an ageing society represents both a social necessity and an economic opportunity. More specifically, it is emphasised that ICT holds the key for more efficient management and delivery of health and social care for the aged population thereby facilitating active ageing (Organisation for Economic Cooperation Development, 2007).

Advancement in Telecare

This section focuses on telecare services, one of the most important examples of ICT. Telecare is defined for current purposes mainly in the form of ICT-supported remote social care services. It is the "continuous, automatic and remote monitoring of real time emergencies and lifestyle changes over time in order to manage the risks associated with independent living" as defined by Tunstall, the leading telecare developer in the world.

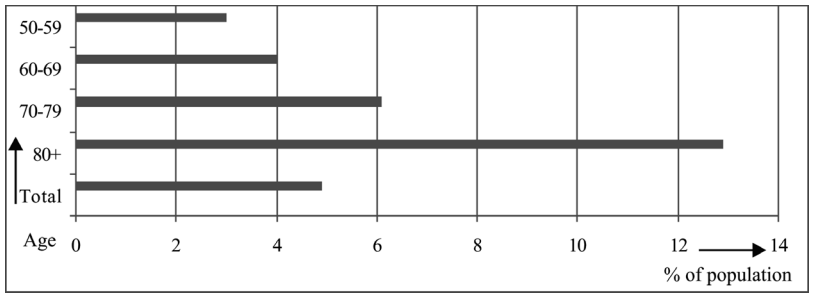
Telecare systems essentially perform two basic functions:

1. *Detect and Record Emergencies:* These systems control processors which process the signals from sensors and detect events such as major falls or heart-attacks, in which case, carers are immediately notified. These systems can also compute the time variation of minor events monitored over a long time and this data in the form of graphs, etc. is useful for caregivers to determine any change necessary in the course of treatment.
2. *Reduce chances of an emergency:* As an illustration we can consider a sound-producing device attached to asthma inhalers for the elderly which can be remotely activated in order to aid in finding them easily in case of an impending asthma attack.

Telecare includes social alarm services, also known as first generation telecare, and more advanced telecare services involving additional sensors and other variants. Figure 1 represents the use of

Figure 1

Age -related utilisation of social alarms among the 50+ population in five EU countries with the age groups listed on the vertical axis (Kubitschke and Cullen, 2010)



social alarms among 50+ populations in the four European countries mentioned below. United States of America is the only non-European example included in the following list.

Germany

Social alarm services have been provided in Germany for more than 25 years and are available throughout the country. Nearly 90 per cent of the social alarm services are provided by six large social welfare organisations. The rest of the market is made up by commercial providers, such as Recontrol, Tunstall, Vitaphone, HausNotruf Service GmbH and Bosch (Kubitschke and Cullen, 2010). In addition, an increasing number of housing organisations are providing social alarm services, e.g. the housing societies in Wuppertal or in Gelsenkirchen within the framework of SOPHIA. Some of the service providers also offer mobile alarms alongwith GPS localisation. Mobile alarms are not widely used, nor is, since reimbursement in these types of services within the existing framework of the long term care insurance possible yet. The social welfare organisations that are providing the social alarm services often have their own call centres. There are around 180 call centres run by welfare as well as commercial organisations in Germany. While some forms of telecare are widely available in the form of enhancements to basic social alarms (e.g. smoke detectors, gas detectors, fall detectors or movement detectors), in practice there is rather little usage of anything other than basic alarms. Some social alarm providers offer additional services such as organisation of home- and outpatient services, and reminder calls (partly automated), although the latter appear not to be much in use. Apart from social-alarm based telecare, there are only a few other telecare services up-and-running in the marketplace. One example is the SOPHIA service which is a commercial picture-based care and communication service for old people, operated as a regional franchise company which seeks to extend operations nationwide. The service model is for a new standard for safety and security, communication, comfort, telemedicine, multimedia and facility management. It is currently the only picture communication service. Several other efforts to establish comparable services on the German senior market failed. Telecare devices and services are yet not listed in the eligibility catalogues of insurers, which means that costs are not reimbursed

under the insurance systems and have to be paid for out of pocket. The government here has also helped in setting up the research programme on Ambient Assisted Living (AAL), jointly organised by different countries across Europe.

France

Social alarm services are widely available throughout the country and are provided at the level of counties and municipalities. Service operation may include various players such as local fire departments, commercial organisations and insurance companies. Uptake of social alarms is estimated at about 3 per cent of the population aged 65 and above. Existence of considerable variation in end user charges across the country has been reported. It is estimated that the average monthly service charge ranged between 25 and 35 Euro (Kubitschke and Cullen, 2010). Beyond this, sometimes an initial installation charge may be imposed on the end user, which may amount to about 50 Euro. Social funding is estimated to range between 30 per cent and 50 per cent of monthly costs, while in some parts of the country the service has been reported to be provided free of charge. Users who are eligible to receive support under the social benefit scheme can receive full cost reimbursement.

United Kingdom

The UK has a well-developed infrastructure of community alarm services provided by local housing authorities, social service organizations and voluntary and private sectors. Social alarm services are provided to both section of people, those who are living in sheltered housing and those in ordinary housing in the community. There is also a significant private subscriber market. Overall, there are an estimated 1.5–1.6 million people using some form of social alarm in the UK, representing about 15 per cent of those aged 65 years or older (*Ibid*). Most local authorities run an alarm scheme, either directly provided by themselves or with outsourcing to a private supplier. In general, it seems that outside the sheltered housing context, family carers are typically the main responders once the call centre has been alerted, although in some areas the social care services also provide a mobile response team in addition to the nominated informal carer response. The charging/reimbursement situation varies across local

authorities. As a general rule, it seems that equipment is provided free of charge to those with an assessed need and users pay a monthly usage charge unless they are eligible for a waiver on the basis of low income. User costs may vary from 10 to 25 euro per month, depending on location and provider. In recent years, social care authorities have been putting into place telecare sensor services (e.g. smoke, heat, flood detectors) and the UK is on the verge of taking telecare into the mainstream. This has been driven by policy and funding, including the Preventative Technology Grant in England and other programmes on telecare in Scotland, Wales and Northern Ireland. It has been reported there were nearly 1,50,000 new telecare users in England in 2006/7, and a further 1,61,000 in 2007/8. This approximately amounts to about 3 per cent of the population aged 65 years or older who are receiving 'telecare'. Provision and charging approaches vary considerably across local authorities. In general, the most common approach of telecare sensor services seems to be similar to that of social alarms although sometimes at a higher level because of the additional extras provided. Preventative Technology Grant funding is given to councils in England with expectation that they will work with volunteers and government authorities in housing to establish new services. Some local authorities/primary care trusts have recently claimed to be providing mainstream telecare services. It would appear that telecare is now embedded in government health and social care policy but it is yet to be fully embedded in mainstream services. The Scottish government have been promoting telecare service provision through a Telecare Development Programme since 2006. Regional care providers have started providing practical and implementable solutions tailored to the local environment. The Welsh Telecare strategy which was launched in 2005 gives grants to local authorities. A Telecare capital grant of £9 million has been made available (with a policy target of providing 10,000 homes with telecare equipment), together with additional money to support the development of telecare strategies. All 22 Welsh local authorities have now produced telecare strategies, which in many cases are very ambitious. Based on monitoring reports it is expected that by the end of the grant period some 45,000 people will be using a telecare service other than a community alarm (this would be about 7 per cent of the population

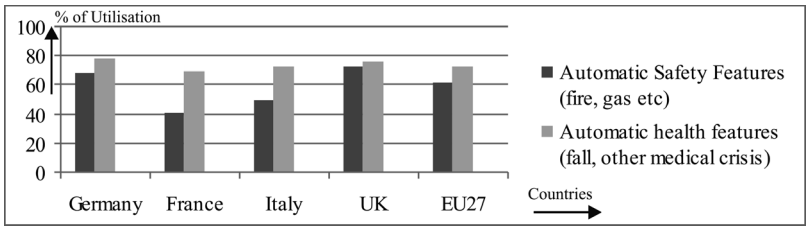
aged 65 years and older). The Minister for Health, Social Services and Public Safety in Northern Ireland announced a grant of £1.5 million in January 2008 for pilot projects to promote the development of new technologies to assist people to live at home over the next two years. The European Centre for Connected Health was established at the same time to promote improvements in patient care through the use of technology and to fast track new products and innovation in health and social services. Substantial investment was planned to use remote tele-monitoring to improve care for people with chronic conditions.

Italy

Social alarm services are widely available, although many local service offerings seem to have emerged only during recent years. Today, the major municipalities in Italy seem to have initiated social alarm schemes and in some cases such schemes have been initiated by the Provinces. Uptake is estimated between 1 per cent and 2 per cent of the overall population aged 65 years and above (Kubitschke and Cullen, 2010). In many cases the technical infrastructure, notably alarm centres, and the service itself are operated by commercial service providers or third sector organisations. This accords with the general situation in Italy where social and welfare service frameworks are determined on local or regional administrative levels and are often complemented by services provided by commercial and/or voluntary organisations. There seems to be no general charging model that applies across the whole country. Individual examples suggest that users tend to be charged a monthly service fee of about 20–40 Euros.

Figure 2

Sector-wise utilisation for social alarms in the European countries (Kubitschke and Cullen, 2010)



Under certain circumstances users may be eligible to use the service free of charge.

Figure 2 illustrates the utilisation rate of telecare in different countries of Europe.

United States

Social alarms are known and used as personal emergency response systems (PERS) throughout USA. There are both national and local providers, including private companies, hospitals and social service agencies. It has been estimated that about 2.3 per cent of the population aged 65 years and older use social alarms (*Ibid*). The main forms of provision are either linked to healthcare facilities or private companies. In the former case, the response may often be provided by staff employed by the healthcare facility; in the latter case, response would normally be by local, user-nominated contacts. Historically, the focus seems to have been especially on provision by hospitals or other healthcare facilities with a view to reducing bed-occupancy and other costs. There also has been provision by religious/charities as a more social welfare oriented service, and by manufacturers and security companies. Most PERS are purchased out of pocket by the individual or their family members. Purchase prices range from $200 to more than $1,500. There are additional charges for installation and monthly monitoring ranging from $10–$30.

In America, there has been an overall increase in interest in telecare, with the emphasis apparently more on healthcare than social care in a wider sense. Such 'telecare' services are provided by a range of providers including medical practice sites, hospitals and social service providers, both public and private. The availability of services varies from state to state with little or no coherence in application or utilization. The extent of take-up varies hugely across the country and there is no data available on the extent of take-up. To date, the Veterans Administration healthcare system seems to be the main provider of telecare services with an independent living focus, even though the main focus of its remote support monitoring is telehealth. Some of the services have been mainstreamed. In Florida, for example, the Low ADL Monitoring Program (LAMP) is a Community Care

Coordination Service (CCCS) program designed to address the needs of veterans with activities of daily living (ADL).

Summary of Benefits Obtained and Preliminary Identification of Barriers

A successful telecare application is seen to have certain established benefits:

1. The most important benefit is the improvement in patient prognosis, including both the number of emergency hospital admissions and mortality rate.
2. The old will also be able to live a more independent life, taking care of themselves with their dignity intact.
3. Also, the respective governments benefit from the decrease in monetary benefits (given to people with disability) and higher tax returns which in turn leads to more spendable income.
4. Finally, ICT in the form of telecare has been a boon to unpaid caregivers as it allows them to pursue paid employment in addition to the care-giving job and also gives further assurance about the security and well-being of the elders.

The extent of mainstreaming of home telehealth is very limited to date and in many countries no major drivers can yet be discerned. In general, increased attention being given to more effective management of chronic diseases and increase in importance of this with population of ageing provides the most important underlying driver, even if this is not leading to a lot of mainstream telehealth yet (Figueras, *et al.*, 2008).

In relation to first generation telecare, the key factors of influence seem to vary considerably across countries. In fact, some countries may already be at 'saturation' point to a certain degree (Solow, 1956) and thus have no concrete barriers, as such, to the achievement of higher penetration levels. Underlying this may be some important variability in perceptions of the role of social alarms in social care, and of where it fits in the spectrum of human and other services that are needed. More generally, where they exist, the main barriers appear to be limited public provision and lack of public funding and disparities in geographical availability in some countries. It also seems that technology and, especially, technological change may be a limiting

factor in some countries, for example upgrading old systems to work with new digital telecommunications networks and providing services to IP telephony user.

Role of ICT In Ageing: An Overview of the Situation in India

Ageing of population is a major aspect of the process of demographic transition. The developed regions of the world being ahead of the developing countries with respect to demographic transition have already experienced its consequences and the developing world is currently facing the consequences. Even though the relative number of elderly in some developed countries seems to be on the lower side, the sheer population size of these countries significantly increases the absolute numbers (Chen, 1998). There has been a spurt in the studies focused on developing countries' elderly population: this can be understood to be the result of the deteriorating living conditions of the elderly in these countries. Natural demographic change account for the increasing numbers while the shift in traditional family structure due to modernisation and migration of younger family members is to blame for the socio-economic degradation of the elderly.

Projected increases in both the absolute and the relative sizes of the elderly population in many third world countries are a subject of growing concern for public policy. Such increases in the elderly population are the result of changing fertility and mortality regimes over the past 40 to 50 years. The combination of high fertility and declining mortality during the twentieth century has resulted in large and rapid increases in elderly populations as successively larger cohorts step into old age. Further, the sharp decline in fertility experienced in recent times is bound to lead to an increase in the population of the elderly in the future. Besides, given that these demographic changes have been accompanied by rapid and profound socio-economic changes, cohorts might differ in their experience as they join the ranks of the elderly. Against this backdrop, we may now preface our discussion with an account of the structure and size of the elderly population. The number of elderly in the developing countries has been growing at a phenomenal rate; in 1990 the population of persons aged 60 years and above in the developing countries exceeded that of

the developed countries. According to present indications, most of this trend of growth would take place in developing countries and over half of this would be in Asia. Obviously, the two major population giants of Asia, namely India and China would contribute a significant proportion to the growth of the elderly.

In India, the 2011 census has shown that the elderly population consisting of 28 states and 7 Union Territories accounted for 97 million. In 1961, the elderly population had been only 24 million; it increased to 43 million in 1981 and to 57 million in 1991. The proportion of elderly persons in India has increased from 5.63 per cent in 1961 to 6.58 per cent in 1991 and to 8 per cent in 2011. Within the elderly population, persons aged 70 and above have also grown rapidly; from a mere 8 million in 1961 to 21 million in 1991 and to 40 million in 2001. The growth rates among the different groups of the elderly, namely 60 years plus, 70 years plus and 80 years plus during the decade 1991–2001, were much higher than that of the general population growth rate of 2 per cent per annum (Bose and Shankardass, 2004), a trend continuing to this day. Available findings on ageing suggest that fertility as compared to mortality has played a predominant role in the ageing process. As far as India is concerned, there has been a substantial reduction in mortality compared to fertility since 1950. For instance, while the crude birth rate declined by 52 per cent from 47.3 during 1951–61 to 22.8 in 1999, the crude death rate fell more steeply by 70 per cent from 28.5 to 8.4 during the same period (Chakraborti, *et al.,* 2004). Logically, therefore, India is expected to undergo a more rapid decline in fertility in the immediate future than mortality because mortality has already fallen to an extremely low level. The ageing process in India is expected to be, therefore, faster in the years to come than in other developing countries. Moreover, the transition from high to low levels of fertility is expected to narrow down the age structure at its base and broaden it at the top (D'Souza, 1989). In addition, improvement in life expectancy at all ages would allow more old people to survive thus intensifying the ageing process. In this context, an examination of the rising trends in life expectancy indicates that the gain is going to be shared more and more by elderly people, a process which would make them live even longer (Clark, *et al.,* 1997). The size of India's elderly

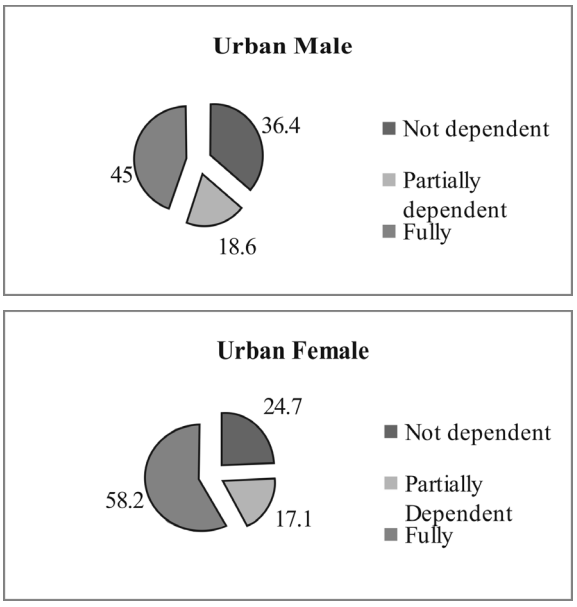
population aged 60 and above is expected to increase from 77 million in 2001 to 179 million in 2031 and further to 301 million in 2051. The proportion is likely to reach 12 per cent of the population in 2031 and 17 per cent in 2051. The number of elderly persons above 70 years of age (old-old) is likely to increase more sharply than those of 60 years and above. The old-old are projected to increase five-fold during 2001–2051 – from 29 million in 2001 to 132 million in 2051 (Bordia and Bhardwaj, 2003). Their proportion is expected to rise from 2.9 per cent to 7.6 per cent.

Health Concerns of the Old in India

Health care of the elderly is a major concern of a society as old people are more prone to morbidity than young age groups. Ageing is invariably accompanied by multiple physical ailments, but the less publicly acknowledged fact is that the aged are more prone to mental ailments as well, which arises from nervous system disorders, old-age and perceived quality of life including comfort and independence.

Figure 3

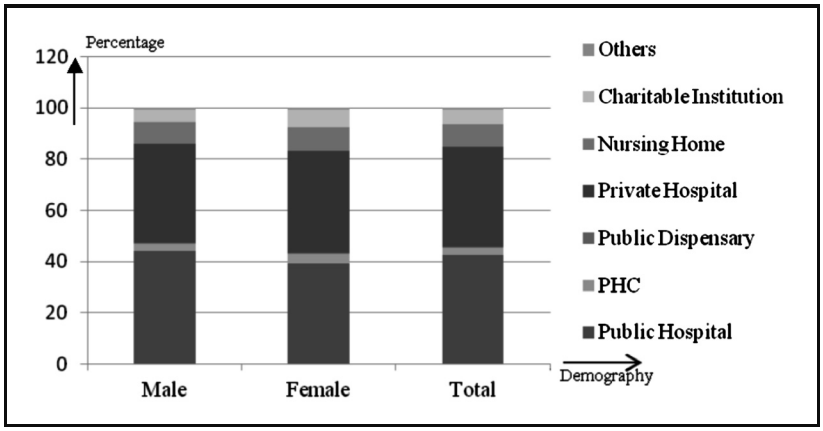
Dependency Status among the Elderly (Irudaya Rajan, et al., 2003)



Preliminary studies by government and private organisations point to the deplorable health status of the Indian elderly population.

The proportion of the sick and the bedridden among the elderly is found to increase with age; the major physical disability consists of blindness and deafness. A study of urban elderly in Gujarat found deteriorating physical conditions among two-thirds of the elderly, such as poor vision, impairment of hearing, arthritis and loss of memory. An interesting observation made in this study relates to the sick elderly's preference for treatment by private doctors. Besides physical ailments, psychiatric morbidity is also prevalent among a large proportion of the elderly. An enquiry in this direction provides evidence of psychiatric morbidity (Darshan, *et al.,* 1987) among the elderly. A sharp distinction between the functional and organic aspects of ailments is suggested by a large number of studies. Functional disorder strikes first and gradually develops into organic disorders around the age of seventy. Another rural survey reported that around 5 per cent of the elderly were bedridden and another 18.5 per cent had only limited mobility. Given the prevalence of ill health and disability among the elderly, it was also found that dissatisfaction existed among the elderly with regard to the provision of medical aid. The sick elderly lacked proper familial care and that public health services were

Figure 4
Health Service by Elderly (Irudaya Rajan, et al., 2003)



insufficient to meet the health care needs of the elderly. The uptake of healthcare from different sources is illustrated in Figure 4.

Among the elderly, 80 per cent died at home and only 17 per cent died in hospitals (9 per cent in government hospitals compared to 8 per cent in private hospitals). Similarly, close to 30 per cent of the elderly had not received any medical attention before death (D'Souza, 1989). A few had been examined by medical practitioners. One in three was reported to have died of old age. More than 5 per cent of the elderly died due to causes such as disorders related to the lungs, blood circulation and digestion.

Approximately 50 per cent of all elderly Indians are under lifelong medication for at least one chronic disease and this trend is stronger among the urban population. The Eastern region led all the other regions in India in the matter. The percentage of elderly (two out of three) suffering from at least one chronic disease was the highest in this region. It was followed by the South; the lowest proportions were in the North and North-Western regions of India. Similarly, one out of every five elderly reported suffering from two chronic diseases canvassed in the NSS; from Figure 5, we can see that close to three per cent suffered from three chronic diseases.

Figure 5

Reported Chronic Diseases in Old Age (Irudaya Rajan, et al., 2003)

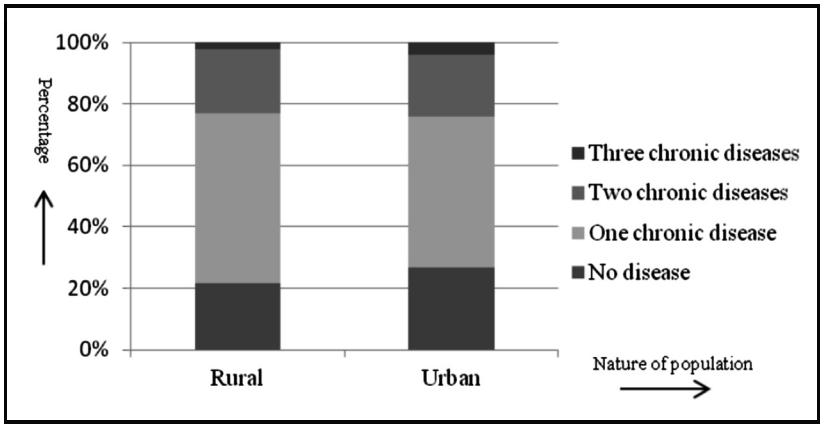
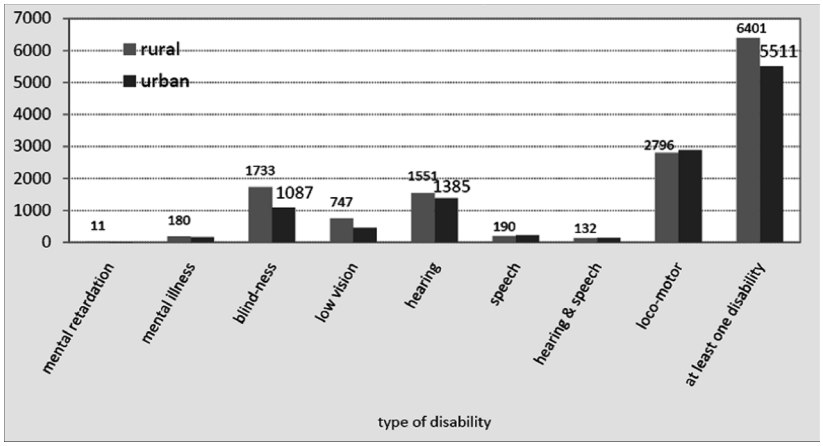


Figure 6
Number of Disabled per 1 Lakh Elderly Persons for Different Types of Disability (Irudaya Rajan, et al., 2003)



Five types of disabilities of the elderly were probed by the NSS: visual impairment, hearing problem, difficulty in walking (locomotor problem), problems in speech and senility. The prevailing disability demography in India (*Ibid*) is illustrated in Figure 6 and Figure 7.

Figure 7
Percentage of Differently Abled Old Age Population (Irudaya Rajan, et al., 2003)

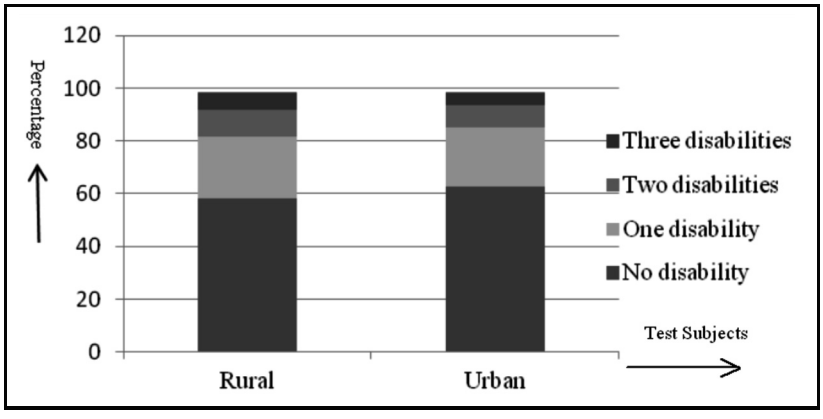
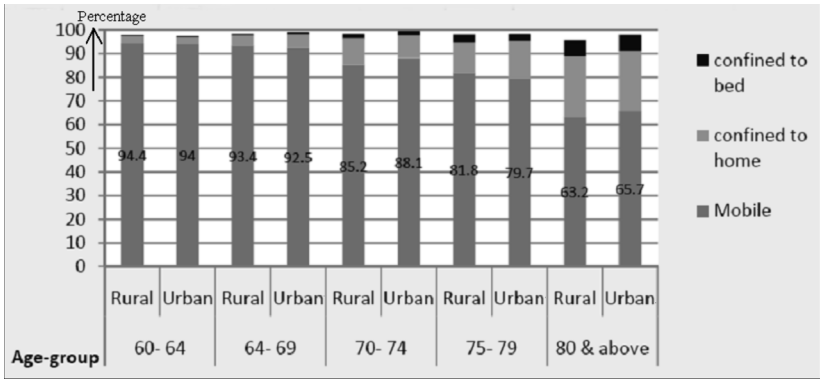


Figure 8

Percentage Distribution of Elderly Men of Various Age Group by State of Physical Mobility (Ibid)



Twenty-five per cent of the elderly in India suffered from visual impairment, followed by hearing difficulties (14%) and locomotor disability and senility (each 11%). The prevalence rates of all the five disabilities were higher in rural than in urban areas (James, 1994). Except in respect of visual impairment, women were ahead of males in respect of the disabilities. Though the elderly in India tend to suffer from many ailments, particularly the old-old and the oldest old, they

Figure 9

Per cent of Elderly Women of Various Age Groups by State of Physical Mobility (Irudaya Rajan, et al., 2003)

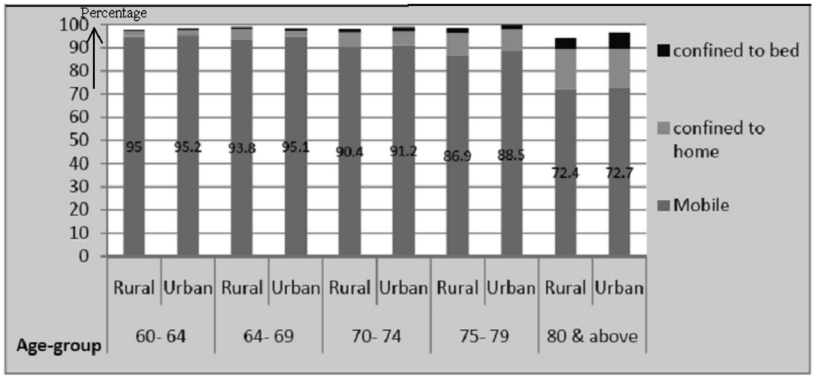
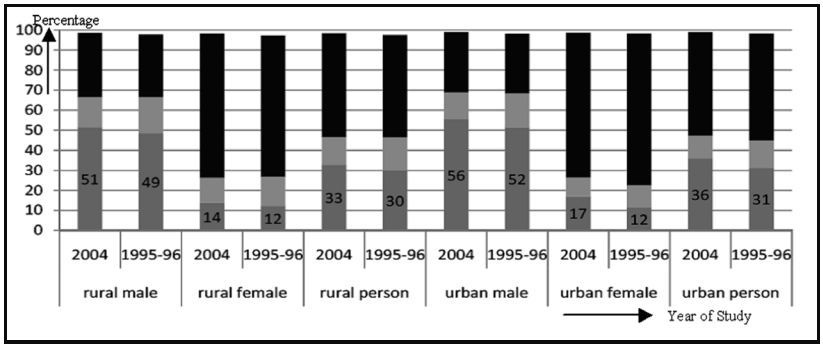


Figure 10
Percentage of Elderly Persons by State of Economic Independence (Irudaya Rajan, et al., 2003)



do not undergo proper medical treatment due to absence of a comprehensive health insurance scheme; this is particularly true in the case of the poorer elderly (Gulati and Irudaya Rajan, 1999). One such disability is the lack of physical mobility which affects a large population of India as can be seen from Figure 8 and Figure 9.

Dependency among the elderly population in India is illustrated in Figure 3 which shows high degree of dependence across the rural-urban divide. This dependence is not only of economic origin but is also associated with first-hand care, as can be seen from the demographically differentiated graph in Figure 10.

Daily Life Assistance: An Illustration

Consider a retired octogenarian who is living all by his own in the outskirts of the city. In spite of his age related physical limitations he seems perfectly at ease largely due to a well organised and holistic ICT network which caters to his everyday needs. A system installed in his house provides a proactive environment with a range of interconnected sensors, devices and smart appliances working together to provide a safe and secure place to live. These appliances are easy to use due to their customized interfaces and are connected to the neighbourhood care centre. This allows, when necessary, remote operation by authorized personnel. As part of the system infrastructure, the smart phones of his children also interact with his home during times

of emergency. Several video cameras distributed along the house allow observing his daily routines (by authorized people) and, at the same time, maintain his privacy. The system analyses the situation from the captured images and decides on the best course of assistance, which varies from helping in cooking to interacting with the care-providers. The installed system is also able to react to the most common domestic accidents that are recurrent to people living alone. If it sees him suffering a potential injury, like falling on the floor or cutting himself, the system inquires him to make sure he is well. This interaction is done via spoken natural language. If there is no reply, an alert is immediately sent to his children and the care centre.

Thus with proper application of ICT technology these short-comings which are largely prevalent among the aged community at present, can be successfully curtailed and an overall upliftment is definitely possible.

Existent Organizations In India Supporting Active Ageing

In India, *HelpAge* and *Agewell* are organizations working towards creating awareness of the problems and needs of older persons in society and government. But, they do not provide any specific platform for interaction between volunteers or emergency assistance to older people. Heritage Health Care, which is based out of Hyderabad and has 18 years of experience in treating senior citizens has diversified from a geriatric hospital to providing care at home and personalized old age home. But unlike the European and American counterparts, there has been no such noticeable progress in the field of application of ICT for helping the aged population (Knodel and Debavalya, 1997). As a result, there are several areas in the healthcare services which can be developed by using ICT, so as to include old people within the perimeter of advanced telehealth and telecare programmes (as in developed countries), for improved and prompt medicare.

India being a developing country, specific case of telecare may actually work to her advantage. India can use the scientific knowledge and intellectual resources already available due to the extensive R&D investments done by developed countries. In fact, a joint survey by Georgia State University and Apollo Telenet working Foundation

shows that Indians are quickly becoming conversant with the concept of telecare: 55 per cent of rural and 72 per cent of urban population is aware about and open to using telecare services. In fact the Indian government has recently planned to install 1,00,000 computer centres in rural areas, which will further increase awareness about telecare.

Moreover the "Smart City" plan of the Government of India also includes provisions for use of telecare to create a holistic automated environment. Rs 7,060 crore has already been provisioned as seed money for this project, which is to be utilised for information technology to provide the most efficient and comfortable living standard for the bulging neo-middle class in the Indian society.

Fields of Improvement

Old people value their independence, and thus there is a need of an effective proactive environment which will function remotely and will consist of a group of professionally trained and dedicated volunteers, who can be available to old people as and when needed during emergency situation. A large section of the aged community of our country is in need of assistance but the present market fails to cater to their needs. Some of the NGOs, in spite of aiming to work for the upliftment of the aged population, largely fail to deliver as per the requirement. Figure 11 and Figure 12 depict the current scenario of Kolkata, one of the major metro cities of our country (Liebig, *et al.*, 2003). So various functioning units of public healthcare need to be

Figure 11
Need for Support (Liebig, et al., 2003)

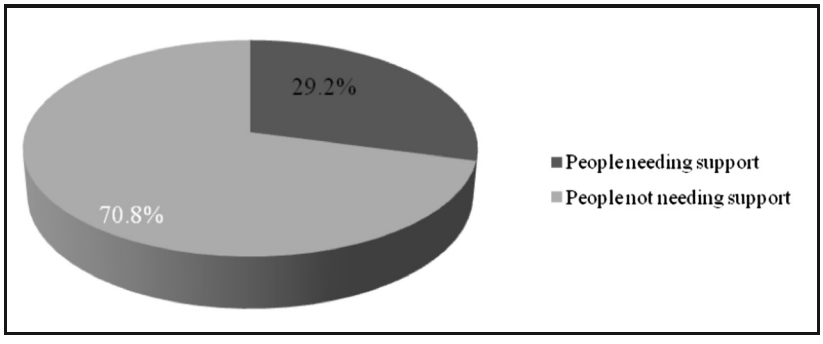
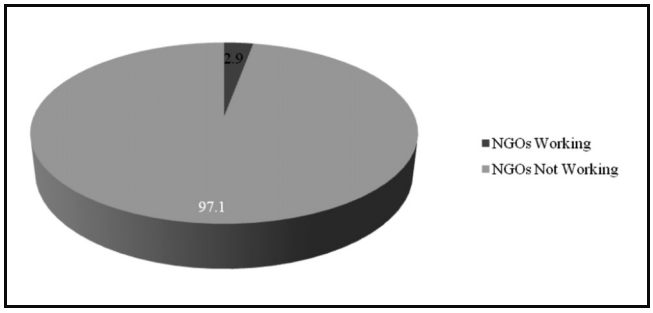


Figure 12
Effectiveness of NGOs (Liebig, et al., 2003)



integrated to form an efficient network to function effectively in tandem.

One serious problem is obviously, lack of professional caregivers which often proves to be detrimental in this respect.

On the other hand, a user friendly technology is required, in the form of radio-alarms and effective social networking so that old people can connect to the health-centres when they feel the need of any sort of medical assistance. This also helps older people overcome isolation and loneliness, and increases possibilities for keeping in contact with friends and also extending their social involvement (Subrahmanya and Jhabvala, 2000). Thus, a person with movement disability can use an alarm if (s)he has any difficulty in movement, so that a trained caregiver is available for immediate assistance. Obviously it requires prompt service, so efficient management and monitoring of the entire telehealth facility is of immense importance. Technology can assist in normal daily life activities, like tasks at home, mobility, safety, etc. Main developments under this perspective are focused on assistance at home, namely for elderly people living alone, which can be further expanded into developing smart homes. It includes services such as living status monitoring, with connection to care providers in case of any emergency, companion and service robots, integration of intelligent home appliances, etc. Support outside home, namely in terms of mobility assistance, shopping assistance, and other daily life activities, is also considered (Schafer, 1999).

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Factors Associated with Health Seeking Behaviour Regarding Non-communicable Diseases Among Elderly in A Rural Community in Karnataka (India)

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ABSTRACT

Old-age is a time of multiple illnesses and general disability. The present study was planned to assess health seeking behaviour regarding non-communicable diseases (NCDs) among rural elderly. This cross sectional study was undertaken in rural areas of Anekal taluk, Bangalore district using a 30 cluster sampling technique to interview 690 elderly using a pilot tested interview schedule. A total of 97 (14.1%) elderly reported that they were suffering from at least one NCD. Of them, 91.7 per cent sought some form of health care in the past 1 year. Of these, 89.8 per cent followed the prescribed treatment regularly. Younger age, male gender, formal schooling and low and middle socio-economic class were associated with better health seeking behaviour regarding NCDs.

Keywords: Elderly; Health seeking behaviour; Non-communicable disease; Rural India

Non communicable diseases (NCDs) including cardiovascular diseases (CVDs), chronic respiratory illness, cancer and diabetes mellitus are assuming increasing importance globally because they contribute to high morbidity and mortality; for example, 63 per cent (36 million) of the 57 million global deaths in the year 2008 were due to NCDs (WHO, 2010).

Health seeking behaviour is an important determinant of health status of the population and is defined as "any activity undertaken by individuals who perceive themselves to have a health problem or to be ill, for the purpose of finding an appropriate remedy"(Ward, H. *et al*.,).

Health and morbidity are primarily influenced by behavioural decisions of individuals or families, genetically inherited health endowments and the health environment in which they reside. Thus, illness is not a random event, but one that is systematically related to household and community level factors (Duraisamy, P. 2001).

Despite advances in medical knowledge, commentators agree that the greatest gains in health will come through behavioural change (Currie and Wiesenberg 2003). Studies on disease specific treatment seeking behaviour and health seeking behaviour of specific vulnerable groups such as mothers and under-fives have been done among the urban population (Gittelsohn, J. *et al.,* 1998; Baldwin *et al.,* 2005; kaushal M. *et al.,* 2005; Sreeramareddy, *et al.,* 2006).

However, there are only a few studies pertaining to health seeking behaviour of the rural elderly (Masud AS, *et al.,* 2005; Masud AS 2005; Biswas P. 2006 and Narapureddy B. *et al.,* 2012). After an extensive literature search in 'pubmed' and other popular search engines we found that there was a dearth in studies looking at health seeking behaviour of the elderly with respect to NCDs and factors associated with it, especially in the rural Indian context. Thus, research on the specific cause and impact of health seeking behaviour regarding NCDs would help in optimizing geriatric health services for NCDs in rural areas. Research in this area is also necessary to plan for enhanced utilization and provision of need based geriatric services. Hence, we planned the present study with the objectives of assessing the health seeking behavior with respect to non communicable diseases and factors associated with it among rural elderly in Anekal taluk, Bangalore district, Karnataka.

Materials and Methods

This was a cross sectional descriptive study conducted in the rural areas of Anekal taluk, Bangalore district, Karnataka, India using a '30' cluster sampling technique conducted in the months of September and October 2009. Sample size was estimated using a proportion of 68per cent, for seeking health care (following an illness) in a study in rural Bangladesh (Masud, 2005), and substituting in the formula $n = (z^2pq)/d^2$ [at 95% confidence levels; absolute precision = 5%; design effect = 2]. The final sample size was found to be 668 that was rounded off to 690 (nearest number divisible by 30). The total population of the study universe was found to be 2,41,160 and the sampling interval worked out to be 8,038.

The rural areas of Anekal taluk and their respective population totals were listed in the order of their location codes. From the list, the cumulative totals of all consecutive rural areas were calculated. A random number was generated from a currency note. The first cluster was identified as that unit whose cumulative population just exceeded the first random number. For identifying the next cluster, a 'number' was generated by adding the sampling interval to the first random number; the unit whose cumulative population just exceeded this number was selected as the next cluster. Subsequent clusters were identified by adding sampling interval to the previous number generated. A detailed map of Anekal taluk was obtained and each selected cluster was marked on the map. After reaching the chosen cluster, permission to do the study was obtained from the village leader. Subsequently, a rough outline of the village was drawn with a distribution of streets and houses; the village was then divided into segments. One segment was randomly selected from which the first house was also randomly selected and the presence of an elderly person was ascertained. If there were more than one elderly per household, all were included in the study. The subsequent house was identified as that house which was geographically closest to the preceding house.

In this manner, the door to door survey continued till the required number of 23 elderly persons in each cluster was interviewed. All 30 clusters were covered in the same manner. An elderly person was included in the study provided he or she was a permanent resident of the village and consented to be a part of the study. Those who were

seriously moribund or unable to respond to the interview schedule or had a cognitive impairment (mini mental status examination score of less than 20) or were not available for interview even after 2 visits, were excluded from the study.

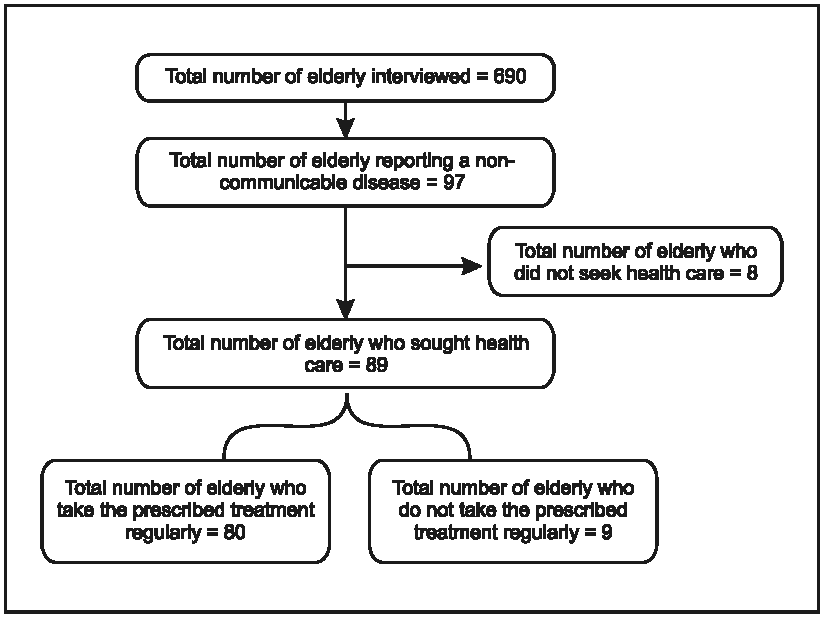
The study tool developed specifically for the purpose of this study was face validated and pilot tested prior to administering to the study subjects. The first section of the study tool assessed the socio-demographic details of the respondent while section 2 assessed the health seeking behaviour. Socioeconomic status was assessed using the Standard of Living Index as proposed by Parasuraman (1999). The study was approved by the institutional ethical review board of St. John's Medical College, Bangalore. Data were entered in MS Excel spreadsheet and analysed using EPI Info version 6 statistical software package. Proportions, chi-square tests and fisher's exact were used to study the associations between select demographic variables and health seeking behaviour.

Results

Baseline Characteristics of the Study Population

A total of 690 elderly were interviewed in 30 rural clusters of Anekal taluk. The mean age of the population was 70.13 yrs (± 6.64). Almost half of the study population were 'young old' (49.42%), 40.14 per cent were 'old old' and 10.43 per cent were 'oldest old'. Proportion of males (50.28%) was higher than that of the females (49.72%). Almost two-thirds of the elderly were married (65.36%), 34.2 per cent were widowed and 0.43 per cent were separated. More than two-thirds of the elderly were illiterates (68.84%). Most of the elderly were not gainfully employed (70.86%). One-fourth of the study population belonged to low socio-economic status (25.65%), 36.67 per cent belonged to the middle and 37.68 per cent belonged to the high socio-economic status. Most of the elderly were financially fully dependent (85.95%) on others, 9.27 per cent were partially dependent while 4.78 per cent were fully independent. A majority of the study population stayed with their children (81.01%), 14.8 per cent were couples living by themselves, 2.46 per cent lived alone while 1.73 per cent lived with relatives. Of the 690 elderly interviewed, 97 elderly reported that they were suffering from at least one NCD. Thus the

Figure 1
Schematic Diagram Depicting the Study Population



prevalence of NCDs in the study population was found to be 14.1 per cent. The NCDs prevalent in the study population were Hypertension (7.7%), Respiratory Disease (5.21%), Diabetes Mellitus (5.07%) and Heart Disease (2.02%).

Health Seeking Behaviour of the Elderly [Figure 1]

Of the 97 elderly assessed for their health seeking behaviour with respect to NCDs, 89 elderly (91.75%) sought some form of health care in the past one year while 8 elderly (8.25%) never sought any health care for their illness. Of those who sought health care, 80 elderly (89.8%) followed the prescribed treatment regularly.

Factors Associated with Health Seeking Behaviour of the Elderly [Table 1]

Of the 97 elderly, 76.3 per cent were males and 23.7 per cent were females; also, 52.57 per cent were young old, 40.21 per cent were old-old and 7.22 per cent were oldest old. A significantly higher

proportion of 'young old' (100%) and 'old old' (87.2%) sought health care as compared to 'oldest old' (57.2%) (Fisher Exact = 0.011). Also, a significantly higher proportion of elderly males (95.9%) sought health care as compared to elderly females (78.26%) (Fisher Exact = 0.017).

Table 1

Health Seeking Behaviour for Non-communicable Diseases – Distribution by Associated Factors

Health Seeking Behaviour	*No Care Sought (%)*	*Traditional Medicine (%)*	*Allopathic Medicine (%)*	*Total (%)*	*Remarks **
Total (%)	8 (8.25)	28 (28.85)	61 (62.9)	n = 97 (100)	
Age Category					
60 – 69 yrs	0 (0)	24 (47.05)	27 (52.95)	51 (52.57)	Fisher Exact = 0.011
70 – 79 yrs	5 (12.82)	4 (10.26)	30 (76.92)	39 (40.21)	
> 80 yrs	3 (42.85)	0 (0)	4 (57.15)	7 (7.22)	
Gender					
Males	3 (4.05)	19 (25.68)	52 (70.27)	74 (76.28)	Fisher Exact = 0.017
Females	5 (21.74)	9 (39.13)	9 (39.13)	23 (23.72)	
Educational Status					
Never attended school	8 (24.25)	9 (27.27)	16 (48.48)	33 (34.02)	Fisher Exact = 0.00009
Attended school	0 (0)	19 (29.68)	45 (70.31)	64 (65.98)	
Occupation					
Gainfully employed	0 (0)	1 (20)	4 (80)	5 (5.15)	Fisher Exact = 1.0
Not gainfully employed	8 (8.7)	27 (29.35)	57 (61.95)	92 (94.85)	
Standard of Living					
Low (< 15)	0 (0)	1 (50)	1 (50)	2 (2.06)	Fisher Exact = 0.019
Middle (16–24)	0 (0)	23 (62.16)	14 (37.84)	37 (38.14)	
High (> 25)	8 (13.79)	4 (6.9)	46 (79.31)	58 (59.8)	

Of the 97 elderly, 34.02 per cent were illiterates, 34.02 per cent had attended primary school, 2.06 per cent had attended middle school and 29.81 per cent had attended high school. A significantly higher proportion of elderly who had attended school sought health care (Fisher Exact = 0.00009). A majority (94.85%) of the elderly were not gainfully employed. All those elderly who were gainfully employed

sought health care. There was no association between employment and health seeking behaviour (Fisher Exact = 1.0). Three fifths of the elderly belonged to high socio-economic class (59.8%) and a significantly higher proportion of elderly from the high socio-economic class did not seek health care (Fisher Exact = 0.019).

The most common reason for seeking health care was that they wanted to be free of disease (73.03%). The other reasons for seeking health care include the doctor's advice to seek health care (20.22%), getting prescription for medicines for the next one month (12.36%) and family members' pressure (1.12%).

Among the 89 elderly who sought health care, 53.95 per cent approached a private allopathic clinic for consultation, 12.35 per cent of the elderly approached a government primary health centre, 31.45 per cent of them sought traditional health care and 2.25 per cent of the elderly sought health care at a medical store.

After having sought health care, 10.11 per cent reported that they do not take the prescribed treatment regularly. The reasons cited for not taking regular treatment include, drugs being very expensive (44.4%), non-availability of drugs in the medical store close by (11.1%) and taking drugs irregularly (88.89%).

Of the 97 elderly who reported to have an NCD, 8 (8.24%) elderly do not seek any form of health care for their illness. The reasons given by them for not seeking any form of health care include, considering it to be a minor illness requiring no treatment (25%), facing not any problem due to the disease (12.5%), finding it boring to take medicines (37.5%) and not having anybody to accompany them (25%).

Discussion

The prevalence of NCDs in the study population was found to be 14.1per cent but 91.75 per cent of those with an NCD sought health care which is a relatively positive trend. The most common reason cited for seeking health care was that the elderly wanted to be free of disease indicating that they consider health to be an important issue. Of those who sought some form of health care, 66.3 per cent sought health care from an institution. Enamul Haque (2001) reported that in their study among rural elderly in Thailand, 87.6 per cent of the study

population sought institutional care for chronic illnesses. A majority of those who sought health care preferred allopathic care (66.3%). Gupta and Dasgupta (2000) in their study in the general population observed that the allopathic system was preferred to all other forms of medicine. It is a known fact that the allopathic system is the largest system of health care utilized in India. This could probably be because allopathic system is based on sound scientific principles and hence more efficacious, is promoted by the Government and is available in most parts of the country.

Almost one third of the elderly with NCD sought traditional care (30.45%) indicating that the elderly have faith in traditional medicine as well. Traditional healers are found everywhere in India and hence easily accessible. They live close to the people and their treatments are based on various combinations of religion, magic and empiricism (Park, 2009). They are much less expensive compared to the allopathic system of medicine. However, Gill S *et al.,* (1999) in their study observed that a very small proportion sought traditional medicine because their study was urban and hospital based.

Life expectancy at 60 years is 18 years while it is 12 years at 70 years (Government of India, 2011). This indicates that the 'young old' and 'old old' have a longer life to live than the oldest old. Health therefore is of higher priority to them than to the oldest old. And hence, probably the young old and old-old have better health seeking behavior.

A significantly higher proportion of elderly males sought health care as compared to elderly females. Gender is an important factor associated with health seeking behaviour particularly in a gender-segregated rural Indian society. In Indian society, women have generally been neglected with respect to all issues; health being no exception. Even among elderly women this trend continues and so it is no surprise that a lesser proportion of elderly females sought health care as compared to elderly males.

A significantly higher proportion of elderly who attended school sought health care as compared to those who never attended school. Education has been identified as an enabling factor in seeking health care. Formal education changes the attitude of the people towards health and improves their health seeking behaviour. However, it was

surprising to know that most of the elderly who had attended school approached a traditional healer for their NCD reflecting the gap in knowledge and practice and shows that belief and faith have strong roots in societal culture probably stronger than formal education. A significantly higher proportion of the elderly belonging to high socio-economic status did not seek health care. This is probably because people of a lower socio-economic status need to be economically productive and hence seek health care.

To conclude, 91.75 per cent of the elderly who reported an NCD sought health care. This is a positive trend. Most of those who sought health care for NCD sought allopathic care. Faith in traditional medicine was also strong. Younger age, male gender, formal school education and low-middle socio-economic class were found to be significantly associated with better health seeking behaviour.

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Elderly Widows Living Alone: Is It a Case of Desertion, Retraction or Locating Space?

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ABSTRACT

Co-residence with children and giving family care is still the predominant pattern for elderly in developing countries (United Nations, 2005); while living alone is uncommon. But several Indian studies (Saraskumari, 2001) indicate that elderly, especially women do live alone and this tendency is likely to increase in future. This relates to higher life expectancy of females, likelihood of more widows because of spousal age difference and living arrangement with spouses before widowhood. Living alone is considered an unusual and a difficult arrangement. The findings of this qualitative study are based on an in-depth study of 26 middle income widows living in a farming community of Pollachi Taluk, in Western Tamil Nadu, India. It was found out that these elderly widows living alone were not victims of dissertation, but it was their own decision. In families where there were internal problems, the widows opted to stay alone or retracted, to reduce the strain, provided space for all children after fulfilling their parental obligations. Another category of widows who opted to live alone was an emerging group who wanted to retain control over their lives, be mobile and establish identity in their spheres of engagement. It was noticed that children, neighbours and siblings were major supportive ties but the overall network was shrinking. Widows who lived alone and exercised for their space and power were living empowered.

Key words: Elderly widows, Living arrangement, Living alone, Empowered women.

Living arrangement is one among many alternative resources of elderly and is often associated with complete care and support, which is not necessarily true. It is usually studied as an outcome in itself neglecting the resources that the elderly possess such as savings, assets, social transfers, etc. The elderly have always been central to discussions on household structure. Although social support extends outside household, co-resident members represent an important part of emotional and material resources (House *et al.,* 1982; Kanaiaupani, *et al.,* 1999).

In developed countries, rising standards of living and changing preferences have increased independent living among the elderly (Kramarow, 1995). Co-residence with children and family care giving is still the predominant pattern for elderly in developing countries (United Nations, 2005), while living alone is uncommon. While in developing regions where strong cultural norms and adherence to filal piety prevail, a similar living arrangement pattern is less apparent. Bongaarts and Zimmer (2002) states co-residence with adult child is least common in Africa but most common in Asia. Co-residence with children is predominant among the elderly in developing world while living alone is rare (Zenkosen, and Fakushi, 1982; Kajima, 1989; Albert and Cattell, 1994). But significant changes from traditional practices are observed in countries such as Japan and South Korea, while such changes are not observed in Taiwan, China, Thailand and Singapore (Asis *et al.,* 1995; Hermalin, 1995) reflecting variations in similar cutural setup. In India NFHS data (2005–2006) indicates that elderly continue to predominantly live in joint family arrangements but proportions of elderly living alone or only with a spouse has considerably increased (Jadhav *et al.,* 2013).

The fact that more elderly women survive to older ages in comparision to male counterparts (Davnzo *et al.,* 2011), reflects the feminization of ageing. A few studies in India also report increase of widowed elderly women (Sarasakumari, 2001; Sathyanarayana *et al.,* 2012) and striking observations of women living alone (Jadhav *et al.,* 2013). A Canadian study indicates that at younger ages men are more

likely to live alone but at later ages women are twice likely to stay alone. Results of Jadhav (2013) study indicate that women above 70 years, widowed, those belonging to lower castes, those with no children or female children, those with more education and those who faced abuse after 60 years are more likely to live alone. This reflects that elderly women in lower economic and socially disadvantaged groups tend to live alone in addition to women with high personal skills and those with problems.

Palloni (2001) refers living arrangement as a comprehensive concept and explains in terms of the type of family, in which the elderly live, the headship they enjoy, the place they stay in and the people they stay with, the kind of relationship they maintain with kith and kin and the extent to which they adjust to the changing environment (Rajan *et al.,* 1995). The predominant patterns being joint, nuclear and alone. A pattern of significance is 'being alone' as it is treated as a 'risk group' by World Health Organization (1977), and is often seen as an undesirable state and has postulated health risk (Kharicha *et al.,* 2007). But is it true in all cases? To clarify, living independently relates to the quality of life which involves remaining active and contributing to the family and community while living alone refers to living separately in a dwelling either, owned, rented or supported. Adequate income, good health and social contacts determines each individuals quality of life (Brunton, 1990) while a sense of security, self management and having a respected place in the community are additional factors (Day, 1996).

Older persons living arrangements are commonly determined by both preferences and constraints. Family oriented cultural values stipulate who should provide care for aged and is manifested in expectancies. It leads to an arrangment where children take care of the elderly while elderly provide some support to bring up grand children. In contrast, western societies are charactersied by individualism. It entails freedom from normative constraints on behaviour and is manifested by tendency towards self gratification. The contemporary norms of independence and autonomy which are assumed to apply to adult and elderly alike (Lowenthal and Robinson, 1976; Beland, 1984) compel the elderly with better health and confidence to live on their own while those dependent live with others. A selective process is at

work. Is it true of the Indian context too? Shapiro and Tate (1985) report that those in joint arrangements reported loss of autonomy. Some studies also support the contention that the elderly have internalized the values of autonomy and independence regarding their living arrangments, where they can act as head when the status is modified, values change or are actualized in other ways giving rise to other arrangements. Does such autonomy operate among Indian women too? It it does, how?

The experience of decision-making by elderly, especially living arrangement is very different from those in other stages of life. This not only alters the life course but also gives access to resources and people. As a result the elderly resort to normative procedures. Related research has not addressed the issue adequately. There is an increasing evidence of elderly, especially women living alone. What processes underlie these decisions? Is it not a difficult decision to break away from norms and establish a separate household? Is it a matter of helplessness or a practical decisions for mutual welfare or a thoughtful decision to express their autonomy? In a patriarchal context, this decision may invoke and invite unpleaasant remarks to social isolation. The present study will address this issue of how these women negotiate and establish their decisions.

During recent years, socio-economic and educational changes in India and accompanying migration and modernization have influenced traditional family organization and values. Conflicts or emotional problems appear because of differences in needs, cultural values and beliefs that exist among family and between the family and the environment. When the co-residence of parents and their adult children becomes optional and not obligatory, the potential for conflict resulting in different attitudes and interests can be controlled (Ikels, 1980).

Hence an elderly person's decision on whom to reside with is complex and influenced by a number of macro demographic and personal factors such as health, age, sex, marital status, education and financial conditions (Loomis *et al.,* 1989; Cafferata, 1987) of the elderly, inclusive of modernization perspectives (Goode, 1963; Levy, 1966). The modernization approach assumes that joint living is more common in traditional agricultural societies and would become less

common as development, industrialization and division of labour increases. The reasons for smaller and less intricate household formation include changes in work, which becomes dependent upon individual skill rather than family wealth, changes in employment opportunities, changes in attitudes, desire for independent living and subsequent movement to public instead of private support systems. Does this perspective apply to the elderly, if so how and why?

Another important approach is decision-making and a comprehensive approach is adopted by Wister (1985) through his decision-making model specific to elderly. The model includes the idea of rationality in decision-making, active vs. passive decision-making, irrational aspects of how people view alternatives and individual vs. joint decision-making. This model comprises sociological forces such as group norms and personal preferences that affect choice.

Several studies have examined the prevalence of living arrangements and the key factors that determine them. However, residential preference of parents and children and their significance in satisfying basic necessities and the extent to which the welfare of the elderly is affected is least addressed. In this backdrop the paper attempts to understand the elderly women's preference and constraints in living arrangement. Why do women break away from the norms of joint living? Is it is a natural process or are they asserting their need for space and liberty or privacy and autonomy. An attempt is made to explain through the decision-making framework (*ibid).* The study also explains the supportive networks of the elderly women living alone.

Method

Sample

26 elderly widows (age varying from 60 years to 72 years) were living alone in Pollachi Taluka, Coimbatore district of Western Tamil Nadu. These elderly women (widows) belonged to 'Kongu Vellala Gounder Community', a traditional agrarian peasant community which is patriarchal and continues to follow the traditional norms.

Out of 26 elderly widows 18 were living in villages and 8 in farm houses. A majority of these elderly widows (N=25) had children, while 5 only had daughters, one was childless. All elderly widows were

land owners and were financially well off. They belonged to middle income group and were capable of doing their day to day activities independently. The range of their widowhood varied from 37 to 65 years and duration of living alone ranged from 5 to 12 years. Majority of these elderly widows were educated up to primary and middle school level and a few of them were illiterate and two had education upto graduate level.

Procedure of Study

In-depth interviews of these elderly widows were conducted individually to elicit information regarding their choice of living arrangement, the patterns and process and exercise of decision-making on various issues.

Findings and Discussion

Living Arrangement

The predominant patterns of living arrangement in the region of this study for most elderly are joint arrangements while only a few elderly live alone. Identifying 26 elderly widows living alone was a difficult task. All 26 elderly widows of this sample took decisions to live alone by themselves. Their decision was based on their own situations. Some participants of this study felt that they had fulfilled their obligations towards their children and for some living alone was a part of natural process. Many of the elderly widows were relatively healthy and were active in managing farming activities. Except one all elderly widows had lived with their children and spouses. Regarding the choices of living arrangements they had options of living alone or partitioning a house and cooking separately, or living in a separate dwelling unit close to children's household or living away from children. It is usually based on the availability of space either at existing structures or in farm. No case of desertion by the children was reported by these elderly widows. They had opted to live alone for specific reasons or as a part of the natural process.

Reasons for Opting Living Alone

In all 14 elderly widows opted to stay alone to provide proper living space to their children and their families and they used to visit

their children's homes. Only 5 widows left their houses because they had problems with their sons and daughter-in-laws. All 19 elderly widows had stayed in joint arrangement with children, but only after their marriage they moved into independent arrangements. 15 of the elderly widows stayed close to their sons' households both in farms and villages. Many elderly widows had both male and female children, 5 had only one female child and 4 had only one male child. The elderly widows were living in smaller dwellings compared to their children.

The elderly widows decided to live separately due to strenuous relations with children or with grand children. Strain in relations usually arise between male and female children or between female children over 'property' as they have equal rights. Difference of opinion between them on property distribution, makes it difficult for the elderly widows to stay with a single child. The sons wield power and refuse to part with property. The elderly widows face an embarrassing situation, and they have no courage to go against the wish of their sons because the presence of son is valued for care in later years, and for the performance of rituals at their death. They also want the daughters to visit them and are of the view: 'Where will the girls go if we don't give them the place'? '*enga povanga avanga*'? '*Ella kulandaikalum veenum'*. Under such situations elderly widows opt to stay alone. These are the situations where settlement of assets is not to the satisfaction of children and the elderly widows continue to hold land ownership. Many a times such situations arise when the partition of land becomes impossible and it remains undivided between the children. The responsibility of dividing the property (land) is with the elderly widow and she is frequented with the ambivalence of whom to support. The elderly widows despite their experiences face difficulty in decision-making.

Strain Relations

The elderly widows experience estranged relations with children, especially sons and with their families. The problem arises largely in adjustments of day to day activities and at times such situations arise when they can no longer stay together. Usually there are cases when the elderly widows who have some property, like to stay with the sons. In such cases, they decide to stay close to the children's quarter in

smaller dwelling and look after themselves. In cases of emergency the son's family takes care and the elderly widow also continues to extend some support to the son's family. It is also the son's responsibility to take care of her daily needs but her other needs such as outing to some place or pilgrimage and other financial necessities are not met by the son. In such situations the daughters are also not frequent visitors to their mothers because they do not want to strain ties with the siblings, it leaves the elderly widows neglected and lonely.

Migration of Children

In certain cases the children are educated and have migrated outside, but the farm land and farming operations continue to operate. The responsibility of taking care of the farm are vested with the elderly widows, to earn and support the children who are dependent on them financially. The elderly widows are entrusted with the responsibility of farm management where sons visit and support is not regular. The daughters also visit the mothers and demand support from them. These elderly widows face a kind of pressure but their utility is felt and needed. Frequently the elderly widows report having conflict with children's ideas and agricultural practices. Norms are followed but personal needs are not addressed. Leisure and recreation, and expenditure for self is not given attention at all. Visiting temple and social functions are the only ways in which the elderly relax. The elderly widows also feel that both these above arrangements are largely to meet the unmet obligations and still consider themselves to be of utility to the children. Such living arrangements of the elderly widows are by their own choice as an alternative to patch up strained relations. This type of arrangement is undertaken for the larger family interest or for a link between practicability and norms.

A few elderly widows (N=7) also resorted to living alone which is both a natural process when obligations towards children are complete, especially when children are settled and the elderly widows have high personal resources such as education, income and health. Such living arrangements are looked upon as a need for the elderly widows to exercise their independence, autonomy and right. There are only a few such cases but they set a trend for the future. They also question what will I do staying elsewhere? I can be of use by managing

something here. These elderly women (widows) not only have experience of running the household but are also confident about themselves and give assistance whenever needed. They have a supportive environment where even children understand that a space is required. These elderly women (widows) also have paid help even when they live in household structure surrounded by kin.

In contrast to the earlier living arrangements where a sense of dependency is overtly expressed, in the latter, they are quite contented with the living arrangement and play an advisory role. There are not many ties which involve in support transactions but the elderly women (widows) are satisfied with the quality of relationships, especially children. Siblings also play a significant role. The notion of quality is also central in social exchange and the quality of relationship can be defined as the degree of satisfaction partners experience as a result of incorporation of each other's needs and well-being in to their own utility function (Rezsohazy, 1991).

Role of Decision-making

Considering the decision-making framework, the issue of monetary calculation does not arise but the gender stereotyped role of sacrifice and kin keeping role of elderly widows emerge as an important reason to take an active decision-making role. Rather than rationality, intra-familial conflicts, decide the separate living arrangement of many. Only when living alone is a natural process, and other members of family are involved in this decision or support the decision, they continue to provide support to her. This support is influenced by the self and children's socio-economic resources.

Living arrangement is subordinate to the larger concern of welfare of elderly. But becomes important when women live longer and quality of life improves. More emphasis should be on bettering the relationship and practically doing what is required for them rather than pushing them into normative structures which is not to the liking of all. Individual autonomy manifest itself in further secularization, accumulation of freedom of choice, replacement of responsibility and greater tolerance for the choices and life styles of others.

Conclusion

Choice of living arrangement is the product of underlying norms and preferences, a set of socio-demographic factors and constraints in choices under the broader context of social change. Elderly widows express a preference for independence in exercising their role as parent. 'Being able to do what they want without outside interference'. Filial obligation and kinship ties are found to be important in support transactions while filial problems trigger the living arrangement decisions. Domestic competence, physical strength, mobility and availability of children are important in determining living arrangement choices. It is also proposed that changes such as better socio-economic position of the elderly, their adult children, high social and geographical mobility and increasing individualism have made independent forms of living arrangement more desirable. Women are considered as kin keepers and they go to the extent of retracting from the normative arrangement and set up a living arrangement independently. Usually elderly men in such contexts take positions and reside with the particular child, but women decide independent arrangements based on their stereotypical expectations of sacrifice and cordiality between and for children. On the other hand only a few elderly women have a chance to express their desires and live alone.

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Who Cares for the Extremely Disabled Elderly?: An Examination of their condition in Rural Bihar

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ABSTRACT

The most dreaded state in old age is disability when the elderly become completely bed ridden and cannot stand up, walk, go to toilets without any help. This state is called Alath in Bhojpuri. At this stage he needs a permanent care giver. In this paper the author has examined the extent and degrees of physical disability among the elderly and their care. For this purpose 694 elderly people (60 years and above) were randomly selected from six villages of Kalyanpur panchayat of District Gopalgang (Bihar state). Out of these 92 elderly respondents (Male=43 and female=49) were found to be Alath. This study is based on these extremely disabled elderly persons. A mixed methodology (including Case study, observation, interview, and group discussion), was used in data collection. It was found that extreme disability (Alath) in old age is a miserable state of life. Various types of disabilities were noticed in the respondents of this study. As age increases the degree and number of disabilities also increase. In joint families, care of elderly is taken by family members and relatives and family friends also help in taking care of the elderly Alath but in nuclear families it was noticed that self care and care by neighbours was the only source of help. Married daughters and sisters also provide great help for disabled elderly in villages. Sometimes caring becomes an over

burden on them. Members of same caste also in some cases help such people. The poor elderly who do not have care givers, curse their destiny.

Key words: Extreme disability, Elderly, Alath, Social Securities, Caregivers

The state of disability in old age is the most fearful condition for very body. Once their mobility is restricted and they become dependent on others for their daily activities they face several anxieties. Disability may be of various types based on its nature and extent of severity, in terms of mobility and ability for self-care, but the extreme form of disability which is called *Alath*, when the elderly become completely immobile and bed-ridden and they are not able to do anything on their own. This is the most dreadful state of life. In India there are 8.6 per cent elderly (60 + years) (as per Census of India, 2011 who are in this state). Many of them suffer from different types of disabilities such as visual, hearing, arthritis, dementia, Alzheimer's disease, etc. According to the NSSO (58th Round, 2002) data locomotors disability was found among 11 per cent and 9 per cent of the older persons in rural and urban areas respectively, 27 per cent were suffering from visual impairment in rural areas; and the corresponding figure for urban areas was 24 per cent. Further 15 per cent and 12 per cent older people were suffering from hearing disability in rural and urban areas respectively.

As the age advances, weakness and disability also increase. There were 33 elderly who were 80 and above and 6 per cent among the young-old persons (60–70) who had significantly restricted or no mobility. In a micro study in north Indian rural villages it was found that nearly 5 per cent older persons were suffering from extreme form of disability and 13 per cent suffered from moderate disability (Ansari H, 2011, 2013). A much larger proportion will be mobile but will be living with various infirmities and would be at risk of injury or will decrease activities and external interactions involving mobility. Rural surveys have also reported that around 4 to 5 per cent of the elderly were bedridden and another 18.5 per cent had limited mobility (Mishra, 1999). The Ageing Survey in India reports that in four states – Tamil Nadu, Kerala, Gujarat and Karnataka; within last one year the

bed ridden elderly were 54 per one thousand (Irudaya, 1993). So it is nearly 5 per cent of the total elderly population who are suffering from extreme form of disability (*Alath*) but this 5 per cent elderly require special attention and care. All social security measures are required for this period. In western countries, there are infirmaries or nursing homes for the care of these elderly but in India it is the family which is taking care of all – disabled and non-disabled elderly.

Various types of other traditional social institutions apart from family such as neighbourhood, community, caste and clans are somehow involved in caring for the elderly in India or work as pressure groups for the family members to take care of their elderly. The family is a place where everybody is taken care of, whether it is elderly, widows, disabled, ill, unemployed, youth and children. Traditionally something is inherent in the Indian family system which is forcing them to take care of their elderly. The 'Western World' is looking towards the 'East' for revival of their family relations and kinship ties. Willigen (2000) says, "In India we have the joint family system in the west you have old age homes, India is better." He further explains that on an average, older Indians live in large households compared to the Americans. Joint families in India are robust and important. Family not only provides economic, social and psychological security but also prevents older persons to become fragile physically. It is not Medicare or high tech hospitals that matter sometimes but it is the love and affection that the members of the family can bestow on older persons that may matter most (Krishnan and Mahadewan, 1992).

Special Meanings and Connotations of Alath

Extreme form of disability is called *Alath* in Bhojpuri area of north Bihar when old people become completely disabled and bed-riddenand who can't stand, can't walk, and can't do any activity. In their active lives they apprehend who will take care of them when they fall *Alath*. Their main anxiety is not death per se but the state of *Alath.* They want to die in their active age so that they should escape from the sufferings of Alath (Ansari, 1994, 1997, 2000, 2002). An elderly has defined Alathas, "*Je khatia par pad jalaokarake Alathkahaljala tab bahutadamikekhatiakatala ...*" *(Those who fall sick and lay in the cot are called being in Alath and in that condition, a hole is made in the cot so that they can defecate by lying in the bed).* This term

perhaps originates from the Bhojpuri or Hindi language and it may be explained as '*A*' + '*Lath*' = *Alath*, where, '*A*' means 'without' and '*Lath*' means the 'walking stick' (bamboo stick). In this way *Alath* refers to those elderly who are not able to walk even with the help of a stick.

Alath may be seen as a natural process of bodily degeneration due to biological ageing and a person becomes physically weak and is finally unable to do anything. An elderly may fall *Alath* due to paralysis also. In case of severe paralytic attack the elderly become disabled. Alath period may last longer, may go on for years, followed by their death but few elderly are lucky to recover from *Alath* and become well and active again (Ansari H, 1997, 2002, 2013).

When *Alath* gets prolonged, the household members pray for the death of the elderly so that he gets free from suffering. During this condition the household members have to face several kinds of problems in caring the elderly and the whole family feels sick (Ansari H, 1997, 2000, 2013).

Alath is considered as punishment by the God for some bad karma or a result of some curses by someone. The victim may curse the harasser by saying, *"Jawo tum aik din jaroorAlathparoge (go, one day you must fall Alath), kidepadenge (germs will enter in your body), guh par chiparipathoge (you will make the cake of own your dung), ghisiniakatoge (your body will slide on your dung)."* That is the reason people intend to do some good deeds (*Punya*) in their active and old age so that they would not suffer from *Alath.*

Alath is also used symbolically as a metaphor. It is used to refer to those people who are lazy, slow, and inactive. Generally the parents scold their children when they do not do their tasks actively by saying, "*Alath pad gayehokakikamnahin karate ho?"(Are you in a state of Alath so that you are not doing your tasks?)"*

Alath is inter-linked with several factors of the elderly life. It denotes the physical disability associated with ageing and thereby provision for care, importance of kith and kin, wealth and money, customs and social values and the importance of traditional social institutions. It also indicates the motivational factors behind care providers – human bonds and ties of family members, inherent relationship of parent and children, community and neighbours, and several other types of social support systems based on the local beliefs of the people.

Why and in what way the *Alath* elderly are taken care of is also an outcome of the whole concept of *Alath*.

Overall, *Alath* is the situation when they face unaccountable miseries all through. They try to ensure that all the security measures should be at place during this period. They save money, store wealth, seek assurance from their children and grandchildren and other relatives to take care of them during their *Alath*. This is also one of the reasons why people desire to have a son because a son is supposed to take care of their parents during their old age. Daughters have to leave the parental house after their marriage (though married daughters also serve their *Alath* parents, in some cases, better than their brothers but all the time, all the daughters, may not be available to serve their parents' due to the responsibility of their in-laws.

Method

Sample

A total 694 (60+) older persons were selected from six villages (having a total population of approximately 9,000 and 1,204 house holds) of one Panchayat – Kalyanpur in Goaplganj district (Bihar state). Out of these 694 respondents it was found that 92 elderly (Male=43 and female=49) were Alath (severally disabled). The present study is based on these 92 elderly people.

Tools Used

A mixed methodology (which included census, case studies, observations, interviews, group discussions) was used in data collection, keeping in view a holistic perspective of the older persons' lives in villages (Ansari, H. 1997; 2002).

Findings and Discussion

Level of Disability Among the Elderly

Through self-reporting by the elderly and their self-perception of disability, several types of disability were found in six villages of Gopalganj district. The various forms of disability were categorised as follows:

1. *Alath* due to paralysis
2. *Alath* due to natural decaying of the body

3. Disability limited to self-care and movement limited to the house – The elderly can walk with difficulties, can go to the toilet and manage defecation and urination. It may be termed as disability with capability of self-care.
4. Disability limited to self-care but elderly can walk outside the house – The elderly can walk, can manage to go outside the house premises with the help of a walking stick.
5. Disability up to the extent when the elderly can walk up to nearby Bazars/hats, agricultural fields can oversee the crops with the help of a walking stick.
6. Complete blindness.
7. Partial blindness.

The distribution of disabled elderly can be seen in the Table 1.

Table 1
Disabilities among the Elderly by Gender

S. No	*Type of Disabilities*	*Number of Disabled Elderly*				
		Male	*Female*	*Total*	*% Total of Disabled*	*% with All Elderly*
1.	Alath due to paralysis	01	05	06	9.67	0.86
2.	Alath due to other causes	10	18	28	30.43	4.03
3.	Disability: Self-care, limited to indoor movement	04	03	07	7.60	1.00
4.	Disability: Self-care, can walk outside	05	07	12	13.04	1.72
5.	Disability but can walk up to market, fields	16	11	27	29.34	3.89
6.	Blind (Complete)	02	05	07	7.60	1.00
7.	Blind (Partial)	05	00	05	5.43	0.72
	Total	43	49	92	100.00	13.25

Total 92 (13.25%) disabled older persons were found among all 694 elderly in all 1,204 households. Among all disabled older persons 34 (4.87%) were suffering from *Alath* and 7 (1%) from complete blindness. So this 5.89 per cent (Alath and complete blind) can be termed as most severe disabilities and are most vulnerable among the

disabled elderly (Table 1). For further analysis disability is categorized as *Alath*, Blind, Severe, and Moderate (Table 2).

Table 2
Type and Severity of Self-perceived Disability by Sex

Clubbed S. No. of Table 1	*S. No.*	*Types of Disability*	*Disabled Elderly*				
			Male	*Female*	*Total*	*% Total*	*% of All Elderly*
1+2	1	Alath	11	23	34	36.96	4.90
6	2	Blind	02	05	07	7.60	1.01
3+4	3	Severe	09	10	19	20.65	2.74
5+7	4	Moderate	21	11	32	34.78	4.61
		Total	43	49	92	100.00	13.26

Disability as Per Age Group

This is quite natural that as age increases, the severity of disability also increases (Table 3).

Table 3
Disability as Per age Groups

Age Group	*Elderly*		
	Total	*Disabled*	*% Disabled of All Elderly*
60–64	274	09	3.28
65–69	207	23	11.11
70–74	113	29	25.66
75–79	53	09	16.98
80–84	18	17	94.44
85–89	06	04	66.66
90+	01	01	100.00
Total	694	92	13.25

Who Cares for the Elderly?

Family members as the main Caregivers for all types of Elderly (disabled and non-disabled)

Largest number of older persons are cared in joint families (45.82%) followed by extended (37.9%), nuclear (8.38%) and 7.93 per cent elderly are taken care of by their own self among the families of

only elderly members either single or couple (Table 4B). If joint families and extended families are clubbed together in terms of care the percentage of elderly constitutes 83.72 per cent.

Table 4A indicates that within joint families maximum number of older people are cared by their close relatives (93.4%), 4.09 per cent by distant relatives, 2.51 per cent are self-dependent and no one depends on neighbours. If the elderly are cared for by their close and distant relatives their proportion becomes 97.4 per cent within joint families and only 2.6 per cent are left on the care by others. Within extended and joint families also majority of them are taken care by their close relatives (87.83%) or by distant relatives (9.88%), in nuclear families the care by self is higher than joint and extended families, but among elderly families care by self is highest (Table 4A). It reflects that among joint and extended families more older persons are dependent on their close relatives.

If the care of elderly is analysed by their structure of families, it clearly shows that close relatives are highest among joint families and lowest among nuclear and elderly members families (Table 4B). Self-care and care by neighbours is highest among the nuclear and only elderly member families (Table 4B).

Table 4A

No. of Elderly by Care Providers within Family Structure

Family Structure	*Close Relatives**	*Distant Relatives*	*Self-care*	*Neighbours*	*Total*
Joint	297(93.40)	13(4.09)	08(2.51)	00	318(100)
Extended	231(87.83)	26(9.88)	06(2.28)	00	263(100)
Nuclear	41(70.69)	01(1.72)	16(27.59)	00	58(100)
Only elderly	09(16.36)	05(9.09)	38(69.09)	03(5.45)	55(100)
Total	578(83.29)	45(6.48)	68(9.80)	03(0.43)	694(100)

( ) per cent distribution of elderly by care providers within the family structure.

* *Close Relatives:* Sons, Daughter-in-law, Unmarried Daughters, Grand Children, and Spouse. *Distant Relatives:* Married Daughters, Son-in-law, Nephew, and Other Relatives. *Self-Care:* Elderly are alone. No one to take care, Elderly has family members but Elderly are left alone. *Neighbours:* Anybody of the village or community.

Table 4B
No. of Elderly by Care Providers Across Family Structures

Family Structure	*Close Relatives*	*Distant Relatives*	*Self-care*	*Neighbours*	*Total*
Joint	297(51.38)	13(28.89)	08(11.76)	00	318(45.82)
Extended	231(39.97)	26(57.78)	06(8.83)	00	263(37.90)
Nuclear	41(7.09)	01(2.22)	16(23.53)	00	58(8.38)
Only elderly	09(1.57)	05(11.11)	38(55.88)	03(100)	55(7.93)
Total	578(100)	45(100)	68(100)	03(100)	694(100)

( ) per cent distribution of elderly by care providers across the family structure

Family Members as the Main Care Providers for the Disabled Elderly

The difference in care of elderly by their close relatives and distant relatives in normal condition and in case of disability is quite evident. As the disability is more severe, more numbers of older persons are cared by their close relatives. Out of 602 non-disabled 494 (82.39%) were taken care of by their close relatives, 38 (6.31%) by married daughters and sons-in-law, 10.96 per cent depend upon self-care and only 02(0.33%) were helped by the neighbours. More numbers of disabled elderly are cared by their close relatives in comparison to the non-disabled elderly. In case of Alath, Blind, and other severe disabilities no elderly depended on self-care and on neighbours (Table 5).

Table 5
Care Providers of the Disabled Elderly by Type of Disability

Disability	*Close Relatives**	*Distant Relatives*	*Self-care*	*Neighbours*	*Total*
Alath	30 (88.23)	04 (11.76)	00	00	34 (100)
Blind	07 (100)	00	00	00	07(100)
Severe	18 (94.74)	00	00	01(5.26)	19(100)
Moderate	27 (84.37)	03 (9.37)	02 (6.25)	00	32(100)
Total Disabled	82 (89.13)	07 (7.61)	02 (2.17)	01 (1.09)	92(100)
Non-disabled	496 (82.39)	38 (6.31)	66 (10.96)	02 (0.33)	602(100)
Grand total	578 (83.29)	45 (6.48)	68 (9.80)	03 (0.43)	694(100)

* *Close Relatives:* Sons, Daughter-in-law, Unmarried Daughters, Grand Children, and Spouse. *Distant Relatives:* Married Daughters, the Son-in-law, Nephew, and Other Relatives. *Self-Care:* Elderly are alone. No one to take care of, Elderly have family members but they are left alone. *Neighbours:* Anybody from the village or community.

Among all 92 disabled elderly, 82 (89.13%) were taken care of by their close relatives; 7 (7.61%) by their married daughters and sons-in-law who were also close relatives. So 96.74 per cent (89.13+7.61%) elderly were taken care of by their close relatives and only 2 (2.17%) disabled elderly who were dependent on themselves and only 01(1.09%) was taken care by neighbours. So out of all disabled elderly only three were out of the cover of the care by their blood relatives (Table 5).

Role of Neighbour, Caste, Clan and community Members in Care of Older Persons

Through various case studies it was found that those 03 elderly who were out of the cover of care by the family members (shown in Table 5) were widows and childless from the poorest category. The first elderly was an old Rajput lady of 70 years of Nadana village. She was famous in the village as '*Kakki*' (Aunty). All villagers used to call her '*Kakki*'. Her husband died quite early. She had a little land which was cultivated by her '*Bhai-Patidar* (Clan), and they took care of her. She was reported to have died when second round of fieldwork of this study began in the year 2000. She never faced any problem of money, food, clothes, etc. because of the land property she had and the sincere care by her clan.

The second older lady belongs to the '*koiry*' caste of Pet Biraicha village and she was also a childless widow. She had also some land in her name which she had given to her '*Patidar*' on '*Bataee*' (share cropping). Whatever the products of her share she was getting enough for her consumption. Her '*Patidar's*' wife and children used to take care for her. They served her because they expected that she will give her land to them before her death. At the time of this field work she was very weak and ill. In severe illness she used to go to her parental house (*naihar, maeeka*) where her sister-in-law and sister-in-law's children used to take care of her by providing medical treatment and clothes. So the kinship, clanship, and parental house are very important institutions for the care and safety of the elderly in case of loneliness, illness and disability.

In both of the above cases the land property of the elderly was indirectly helpful in their care, but it does not mean that those who do

not have any property, they would not be taken care of by anyone. Rather, they are cared by the community members. The third case of the elderly was of a female of 68 years of Pet Biraicha village. She had no land and she depended on her daily wage in agricultural fields. She reported that whenever she was ill, the people of the village helped her. Though she spent her own money for medical treatment yet whenever she felt any need of external help the villagers come forward. She reported that the village community was ready to her help in every crisis.

Role of Married Daughters and Married Sisters in the Care of Disabled Elderly

Importance of kinship is reflected through such case studies where not only married daughters and sisters but also the sons-in-law had come forward for the service of the elderly in case of disability. In case of illness and any other crisis faced by the elderly, married daughter and sisters come to serve their parents/brothers. One female elderly named Bhukhali Devi of Kalyanpur village reported, "*I have no son but only one daughter. After her marriage she looks after her children and her in-laws. She has no time to come here and stay with me. So my son-in-law stays with me, he works here as agricultural labourer and earns wages for me. He cooks for me. He is staying here only for my care*"(Transcribed from Bhojpuri).

Jugi Devi of Pet Biraicha village, a widow, was in a state of *Alath* due to paralysis. She said:

> *My daughter is like my son. She is taking care of me by staying with me and working as agriculture labourer here. She has been living here since I had a paralysis attack. For past three years, I have been on the same spot and am not in a condition to move. She has been bearing all the burden of my service and care. Whenever there is no food in the house, she brings food grains from her in-laws, house. My son-in-law also comes here from time to time (Transcribed from Bhojpuri).*

There were several other cases of this kind who had no sons but only daughters however there were several other cases where there were sons but they themselves were very poor and not in a position to

take care of their old parents. Some separated or migrated to the urban centres for earnings. In such cases the role of married daughters is very important. They help their parents and give the required service and care. Godhana Devi, a widow of Gaderia caste of Pet Biraicha village narrated:

> *My daughter has given me a sari. My sons do not give anything. They are very poor; they can't afford anything for me. My daughter has three sons who are working in Delhi. That's why my daughter is capable of providing me clothes". She further said, "Whenever I fall ill, I wait for my daughter to come here. She comes and takes me to the doctor, provides the cost of medicines and treatment. My daughter-in-law, with whom I am staying, has four kids, one in her lap. All the time one or the other kid remains ill. So my son is over-burdened with bearing the cost of their treatment, their food, clothes and everything. How can he take the burden of my care? I used to tell him that I am coming closer to death, so don't worry about me, instead take care of your wife and children, they have a future.*

It is not just the married daughters who take care of their parents but also married sisters who take care of their ailing elderly brothers. AalimMian of Mathurapur village reported that he had been ill for a long time but he did not reveal much about the help he got from his married sisters and daughters because, as per tradition, taking help from sisters and daughters is considered to be against the prestige in the society. But one woman of a neighbouring house revealed that AalimMian was very poor and had no land and any other source of income. When he used to fall ill there was no way out to get treatment. Then his married sister would come there and take him to her house and provide all the care and medical treatment. After a three-month stay at his sister's house he would come back, but again he fell ill and this time he had to go to his eldest married daughter's house for treatment. This is a perfect example of relevance of kinship. Whether it is *Beti* (daughters) or *Bahin* (sisters) they are very helpful to the elderly during illness and crisis.

Over-Burdening the daughters-in-law in care of Elderly

It is considered that it is the daughter-in-law who is responsible for everything in the house, whether it is preparation of food,

cleanliness of house, serving children and husband or serving the elderly. Traditionally she is expected to give preference to the elderly in service than any other member of the family. If the newly arrived daughter-in-law serves her elderly in-laws patiently, she is considered to be a good *Bahu* (daughter-in-law). In return she gets a lot of blessings from them. In case of *Alath* the daughters-in-law become over-burdened of doing all types of services to the elderly. All members of the family put all the responsibilities on her. She has to wash, assist in defecation, clean their living space, bed, assist in eating, give medicine, and provide everything required by the elderly. They do all the services considering it as their heavenly duty. They say, "*If the daughters-in-law will not do the service to the elderly who else would?*" They believe that if they serve their *Saas-Sasoor* (in-laws) then they will get the same service and care from their children when they become old and infirm alongwith lots of Punya.

Factors Behind Care of Older Persons

Why do family members, the community, and the clan take care of the elderly? What is the motivation behind caring for their older persons? There are certain reasons behind their service. Even though majority of the care providers are themselves very poor and face many difficulties in maintaining their family life with their children and wives yet they serve the older parents considering it as their bounding duty and believing that this is a work that will earn them Punya. There are several traditions, institutionalised behaviours, practices, institutions that compel the people to serve their elderly. There is social conformity, group pressures which force them to take care of the older parents. Some such practices, institutions, beliefs may be termed as *Punya, Samskara* (Socialisation), *Pancha* (Community/Society), *Jaat/Maua* (People of own caste), *Bhai-Patidar* (Clan), kins, *Naihar/Maeeka* (Parental House), etc.

Conclusion

In the Indian context, particularly in case of rural Bihar, the great traditional social institutions are still very significant for the care of the elderly. Even after westernisation, migration, urbanisation, globalisation and modernity the role of family, kinship, neighbourhood, and community is still robust in the care of the elderly in

normal condition and it becomes more caring during the disability of the elderly. Though there is change in fashion, life styles, technology of the youth of today yet the basic social values are intact and there is need to protect and preserve them for future. When the elderly fall *Alath* their kiths and kins come for their service if there are no kins, neighbours, clans, caste, community to provide the necessary service to the elderly, considering it as Punya Karma (good act). Socialisation of children in the way of taking care of their parents and grandparents is also very important. Presenting a ′role model' of elderly care before children of today will be helpful for future care of the elderly because ties of family are breaking slowly and require protection. Social innovations in terms of forming community associations locally will be helpful for elderly care instead of depending on formal institutionalised care such as old age homes and infirmaries. Medical care at doorsteps is the most required system for the *Alath* elderly. Poor families who are taking care of the old should be given some incentives by the government to promote such tradition.

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Elderly Perception of Loneliness and Ways of Resolving it through Positive Ageing

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ABSTRACT

The aim of this study was to assess the perception of elderly persons towards loneliness and to find out how socio-demographic factors and major activities ward off loneliness among elderly subjects of this study. The study was conducted in Kota city of Rajasthan. Out of 129 respondent whose names and addresses were supplied, only 100 respondents, gave their consent to participate in the study, were selected by convenience sampling. To assess their loneliness "Perceived loneliness Scale" was used. These respondents were also asked about their leisure time activities or their activities to live a healthy and positive life. Results show that there was no significant difference in perceived loneliness between male and female respondents. On the basis of the findings of this study, those elderly respondents who were engaged in creative adjustments, religious behaviours and spiritual well-being, felt low level of loneliness or no loneliness and experienced more creative and positive energy.

Keywords: Loneliness, Socio-demographic factors, Activities to ward off loneliness, Positive ageing, Elderly.

Globalization and materialistic attitude and changes in social, economic and demographic factors have led to increase in the neglect

of the elderly. It is evident from the deterioration in relationships of elderly with next generation or with their children, relatives and other members of their community. Loneliness is the objective measure of social isolation. It effects negatively both quality of life and subjective well being of the elderly. Loneliness is a perceived deprivation of social contact, or lack of willingness to share social and emotional experiences. Loneliness may lead to serious health-related consequences with others. It is one of the three main factors leading to depression (Green *et al*., 1992), and an important cause of suicide and suicide attempts. A study carried out by Hansson *et al.,* (1987) revealed that loneliness was related to poor psychological adjustment, dissatisfaction with family and social relationships. As people grow old, the likelihood of experiencing age-related losses increases. Such losses may impede the maintenance or acquisition of desired relationships, resulting in higher incidence of loneliness. Many people experience loneliness either as a result of living alone, lack of close family ties, reduced connections with their culture of origin or inability to actively participate in the local community activities. When this occurs in combination with physical disablement, demoralization and depression are common accompaniments.

The negative effect of loneliness on health in old age has been reported by researchers (Heikkinen *et al*., 1995). A study by Max *et al*., (2005) revealed that the presence of perceived loneliness contributed strongly to the effect of depression on mortality. Loneliness is perceived as a negative construct. The elderly often experience and feel lonely and unwanted. Situational variables like isolation, moving to new location, divorce or death of spouse, low self-esteem, lack of self confidence lead to isolation and chronic loneliness. It impacts physical and mental health. Health risks might include depression and suicide, cardiovascular disease, increased stress level, poor decision-making, alcoholism, drug abuse and progression of Alzheimer's disease.

Positive ageing enables choices in later life about where to live, and receive the needed support to do so. Positive ageing which embraces health, independence, financial security, positive attitude, safety and self-fulfillment would strengthen confidence, autonomy and minimize independence and well being. Concerns about safety

and security are also greatest among older people who are vulnerable because of frailty and lack of resources.

The aim of the study was to assess the perception of elderly persons towards loneliness and to see how their socio-demographic factors and active participation in social, religious and family chores help in removing loneliness among elderly persons.

Methods

The study was conducted at Kota. Two schools were selected from Kota city (Rajasthan). The students of 9th–12th classes of these two schools were given Performa and asked to fill in the details of the older persons whom they know are living with their children in Kota city. The General Information Performa after getting it filled up was collected from each student. The students gave information about 129 elderly persons . These elderly were told the purpose of the study and were asked to participate in it. Out of 129 elderly persons 100 respondents (males = 53 and females = 47) were finally selected for the study by convenient sampling technique.

Tools Used

1. *Perceived loneliness scale:* The scale consists of two parts:
   (A) *Socio-demographic Information:* name, age, type of family, marital status, income, number of children, health and social network and
   (B) *Perceived loneliness statements:* The 35 statements of the scale were grouped under four separate heads: family (19 items), society (6 items), occupation (4 items), and health (6 items)
2. *Activities to ward off loneliness:* The scale consisted of 21 statements grouped in four categories: Daily routine activities (7 items), social welfare (4 items), travelling (5 items) and club (5 items).

These tools were administered individually and the data received was statistically analysed.

Findings And Discussion

Table 1
Perceived Loneliness among Elderly

Loneliness Scores	*Category*	*Male N1=53*		*Female N2=47*		*Total Respondents N=100*
		F	*Percentage%*	*F*	*Percentage%*	
35–82	Low	1	1.89	1	2.13	2
82–129	Medium	47	88.68	43	91.49	90
129–176	High	5	9.43	3	6.38	8

Table 1 shows that one (1.89%) male perceived low loneliness, forty seven (88.68%) males perceived medium loneliness and five (9.43%) perceived high loneliness. One (2.13%) female perceived low loneliness, forty three (91.49%) females perceived medium loneliness and three (6.38%) females perceived high loneliness. This shows that very low per cent of these subjects (male= 9.43% and female= 6.38%) feel extreme loneliness.

There is no significant difference (t value = 1.540) between male (Mean ± S.D =113.0189 ± 17.8621) and female (Mean ± S.D=107.7021 ± 16.4926) perception of loneliness in this sample.

Table 2
Showing the Relationship Between Socio-demographic Factors and Level of Loneliness

S. No.	*Socio-demographic Factors and Extent of Loneliness*	*Chi-square value*		*df*
		Cal Value	*Tab Value*	
1.	Elderly staying with family and alone	0.47(NS)	5.99	2
2.	Age	11.57*	9.49	4
3.	Social network	3.20(NS)	9.49	4
4.	Income	2.11(NS)	9.49	4
5.	Marital status	2.31(NS)	9.49	4
6.	Family status	1.56(NS)	5.99	2

Chi-square value between socio-demographic factors and extent of loneliness was calculated and barring age factor no significant relationship was found out.

Loneliness scores and socio-demographic factors like-elderly staying with family and alone, social network, income, marital status and family status do not cause loneliness. On the basis of findings it may be concluded that as age increases perceived loneliness also increases. The reason might be death of spouse, decreasing social network, losing contact with friends, health problem and isolation.

Table 3

Showing Major Activities to Ward Off Loneliness

S. No.	*Daily Activities*	*Percentage Distribution*
1.	Play with children	39 (1)
2.	Paid bills	5(5)
3.	Leave school to children	34(2)
4.	Home work	7(4)
5.	Shopping	17(3)

Table 3 shows that thirty nine per cent respondents played with children, five per cent respondents paid bill, thirty four per cent respondents left children to school, seven per cent respondents helped children in home work and seventeen per cent respondents helped in shopping. These are activities which kept them busy and helped them to ward off their loneliness.

Table 4

Leisure Time Activities of the Respondents

S. No.	*Engagement in Leisure Time Activities*	*Per cent Distribution*
1.	Reading news paper	33
2.	Reading books	2
3.	Writing poetry	6
4.	Gardening	17
5.	Weaving	23
6.	Writing novels	4

Cont'd...

Cont'd...

7.	Going to temple	64
8.	Listening songs	4
9.	Listening to radio	8
10.	Watching T.V.	32
11.	Reading religious books	13
12.	Going to satsang	32
13.	Playing chess	5
14.	Playing carom	û
15.	Playing cards	2
16.	Taking exercise	5
17.	Taking care of pet animals	5

Table 4 shows that thirty three per cent respondents read news papers, two per cent read books, six per cent write poetry, seventeen per cent do grading, twenty three per cent (women participants) like knitting and stitching , four per cent write stories, sixty four per cent go to temple, four per cent like listening to songs, eight per cent like listening to radio programmes, thirty per cent watch T.V., thirteen per cent read religious books, thirty two per cent go to satsang, five per cent play chess, two per cent play cards, five per cent do exercises and five per cent take care of pet animals.

Table 5
Topics of Discussion/Conversation with Friends

S. No.	*Various Topics*	*Percentage Distribution*
1.	Financial	7
2.	Social	76
3.	Political	5
4.	Educational	4
5.	Others	4

It was found that the targetted elderly people discuss various topics with their friends such as: economics (7%), social issues (76%), political issues (5%), education system (4%) and other topics (4%). It is interesting to note that these people are not interested in politics. Social issues are more important to them.

Table 6
Favourite Programmes on T.V./Listening to Radio

S.No.	*Programme Watched/Listened on T.V./Radio*	*Per cent Distribution*
1.	Social	5
2.	Religion	66
3.	Bhajan keertan	7
4.	Others (T.V. serials)	2

Table 6 shows that five per cent respondents like listening to and watching social programmes on T.V. and radio, sixty six per cent prefer religious programmes, seven per cent watch programmes on bajan-keertan, two per cent respondents watch other serials.

Table 7
Respondents' Engagement with Other Activities

A.	*Social Activities*	*Yes*	*No*
1.	Meeting Friends	40%	60%
2.	Spending time with friends	18%	82%
3.	Participation in competition	25%	75%
B.	**Social services**		
1.	Associating with different social skills	32%	68%
2.	Spending more time in social welfare	32%	68%
3.	Enjoying social welfare	32%	68%
C.	**Travelling**		
1.	Going to holy places	70%	30%
2.	Going for picnic with their friends	71%	29%
3.	Seeing natural beauty and going to natural places	80%	20%
4.	Enjoying traveling with family	80%	20%
5.	Talking about their memories with friends	70%	30%
D.	**Club related information**		
1.	Seeking club membership	11	89%
2.	Paying attention to club facilities and arrangements	11	89%
3.	Thinking about club members problems	11	89%
4.	Participating in all games and activities	11	89%
5.	Experiencing mental peace in club	11	89%

Table 7 shows that forty per cent respondents meet their friends daily where as sixty per cent respondents do not meet their friends regularly. Eighteen per cent respondents spend more time with their friends where as eighty two per cent meet their friends occasionally. Twenty five per cent respondents like to attend "kavi sammelans" and song competitions whereas seventy five per cent respondents do not participate in any such activity.

As far as social services are concerned thirty two per cent respondents participate in social welfare activities and sixty eight per cent respondents do not connect themselves with any social welfare service. Seventy per cent respondents like to go to holy places like 'mandir', church and 'gurudwara' where as nineteen per cent do not go anywhere. Seventy one per cent respondents like to go to picnics with their friends where as forty eight per cent avoide such activities. Eighty per cent respondents like to see natural beauty and go to natural places where as twenty per cent respondents are not interested in going for outings. Eight per cent respondents enjoy traveling with their family members where as twenty two per cent respondents do not find traveling fascinating. Seventy per cent respondents share their memories with their friends but thirty per cent respondents do not like talking about themselves. Eleven per cent respondents are members of clubs and participate in all the activities of clubs. For them going to club gives then pleasure and mental peace.

Conclusion

This study examined that as age increases perceived loneliness increases. The reasons might be death of spouse, decreasing social network, losing contact with friends, loss of mobility due to health problems and isolations. Participation in social, cultural and spiritual activities , leisure time activities and family chores allow older people to continue to exercise their competence, to enjoy respect and esteem, and to maintain or establish supportive and caring relationships.

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Quality of Life of the Elderly in Thiruvananthapuram District, Kerala

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ABSTRACT

The present study on the "Quality of Life of the Elderly" was planned to throw light on the various dimensions involved in the quality of life of the elderly and to investigate those factors which influence quality of life of the elderly. 800 elderly of both the sexes of equal number, age varying from 60 years and above were randomly selected from rural (N=592) and urban (N=208) areas of Thiruvananthapuram district of Kerala. An interview schedule and Quality of life scale, containing 80 items (both positive and negative statements) were administered individually to all the respondents. It was found out that quality of life was to be high among elderly male than their female counter parts. Socio-economic variables such as level of education, employment status, place of residence, family income, companionship, problem faced by them have significant influence on the quality of life of the elderly. It is hoped that the findings of the study will certainly help the planners and policy makers to develop new policies and strategies to improve their quality of life.

Key words: Elderly, Quality of life

Old people are considered as repositories of wisdom, carriers of traditions and transmitters of experience and storehouse of ideas. However, their role is undergoing a metamorphosis because of modernization due to scientific and technological advancement, loss of joint family system, changing values, dual career families, etc. In a youth based culture, there is a strong stereotype attitude towards the aged, resulting in society looking down on older people. There is a negative age discrimination against the elders. Even people in employment suffer from loss of identity after retirement. The elderly consequently suffer from marginalization, alienation and poor living arrangements. The net result of such a situation is poor status for the elderly contributing to loss of personal and social power

India has the second largest number of elderly persons after China. As per 2001 Census reports, South India has the highest number of elderly persons above 60 years and will maintain its lead in the next 40 years. The highest proportion of elderly people is found in Kerala when the elderly constituted 7.5 per cent of population in 1987 and 9 per cent in 2001. One of the notable facts is the greater number of elderly women than elderly men. Kerala has 15 per cent more old women than any other state. The main reason for this is that Kerala is ahead of the rest of the country in fertility transition by 25 years (Rajan, 2009). Decrease in fertility and mortality, a decline in the infant mortality rates, and a continuing rise in life expectancy (currently the highest in India) have helped to create this situation. As the urbanization process in Kerala is very slow, it is also important to point out that the urban and rural distribution of the population by age shows little variation. Therefore, not only do today's elderly reside in rural areas, but the elderly of the future may also be expected to be concentrated in rural areas. As the number of aged people increases, the main area of concern is regarding their quality of life.

The quality of life available to majority of citizens of any country is a direct indicator of its state of economy. Quality of life can be interpreted as a person's sense of well being that stems from satisfaction or dissatisfaction with the areas of life that are important to them (Mukherjee, 2003). Quality of life is a general feeling of happiness which is not a momentary experience but a long term sense of well being. It consists of experiences that cause a person to express his

happiness. The condition of happiness and satisfaction clearly depends upon ability to survive, reasonable state of health and multiplicity of things that permit and cause the achievement of desires and aspirations (Vankayalapati, 2008).

An elderly person's quality of life is defined, first and foremost, by the respect they have for themselves, something over which they have power, and secondly, by the respect the outside world shows to them (Basu, 2000). It is easy to identify seniors who are excited about life. They are active and are well groomed, they watch what they eat and do not sleep their days away. They do not seek to isolate themselves at home or in nursing homes. Those who continue to cultivate their minds and pass on their life experiences enjoy a superior quality of life.

Definition of Terms

Objective

The main objective of the study was:

1. to find out the quality of life of the elderly and to know the factors influencing the quality of life of elderly

Method

Sample

Thiruvananthapuram district, being the capital city of Kerala, was selected as the area for the present study. A total of 800 elderly people (of both the sexes in equal number), age ranging from 60 years and above were selected as the sample for the study. These respondents belonged to both rural (N=592) and urban (208) areas of Thiruvananthapuram districts.

Thiruvananthapuram district comprises 84 grama panchayats, 120 villages, 4 municipalities, 4 taluks, 1 district panchayat, 1 corporation. The district is divided in to four taluks, viz: Thiruvananthapuram, Neyyattinkara, Nedumangadu and Chirayinkeezhu. Almost all the urban areas come under the Thiruvananthapuram taluk. The four taluks comprise a total of 120 villages, which includes both urban and rural areas. Out of these villages, every third village (41) was selected as the area for study. For

detailed information regarding the composition of sample see Table 1A.

Tools Used

A detailed interview schedule was prepared to find out the personal and socio economic details of the sample. A quality of life assessment scale was prepared by the investigator and was used to assess the quality of life of the elderly of this sample. 80 statements of the scale were selected with the help and guidance of subject experts. The eleven dimensions which were identified to be appropriate for assessing the quality of life were incorporated in the scale. These dimensions were: *physical well being, family life satisfaction, friends, living arrangement, economic wellbeing, psychological wellbeing, recreational activities, religious activities, social network, health and decision-making.* Out of these 80 statements of the scale 62 were positive statements and remaining 18 were negative statements. The responses were measured by using 5 point scale viz, *strongly agree, agree, undecided, disagree, and strongly disagree* and were given a scoring of 5,4,3,2, and 1 respectively for a positive statement and vice versa for a negative statement. Thus, the maximum score a person can obtain is 400 if s/he answers all the statements positively and the minimum score is 80.

The reliability and validity of the scale were checked by using the Guttman's split-half method . From the reliability of the half test, the rate of the whole test was calculated using the formula;

Reliability of the whole test =2 x reliability of the half test/1+ reliability of the half test

The value of reliability of the whole test was calculated and found to be 0.5636. As this value is significant and reasonably high, it clearly indicates that the scale has high reliability.

The validity of the quality of life assessment scale was established through the Croubach's Apha methods (value = 0.8239), and were found to be significant, there by indicating a reasonably high construct validity.

All the participants were individually interviewed. The collected data was analysed and appropriate statistical tests were used in the analysis of findings.

Findings and Discussion

Table 1A
Personal Background of the Sample

Personal Variables			
Particulars	*Male (400)*	*Female (400)*	*Total Count (n = 800)*
Age (in years)			
60–69	227 (56.8)	242 (60.5)	469 (58.6)
70–79	134 (33.5)	115 (28.8)	249 (31.1)
80+	39 (9.8)	43 (10.8)	82 (10.3)
Place of Residence			
Rural	295 (73.8)	297 (74.3)	592 (74.0)
Urban	105 (26.3)	103 (25.8)	208 (26.0)
Religion			
Hindu	323 (80.8)	317 (79.3)	640 (80.0)
Christian	38 (9.5)	40 (10.0)	78 (9.7)
Muslim	39 (9.8)	43 (10.8)	82 (10.3)
Marital Status			
Unmarried	2 (0.5)	9. (2.3)	11 (1.4)
Currently married	362 (90.5)	177 (44.3)	539 (67.3)
Widower	23 (5.8)	209 (52.3)	232 (29.0)
Divorced	13 (3.3)	5 (1.3)	18 (2.3)
Number of Children			
Nil	12 (3.0)	14 (3.5)	26 (3.3)
1	29 (7.3)	36 (9.0)	65 (8.1)
2	134 (33.5)	82 (20.5)	216 (27.0)
3	115 (28.8)	105 (26.3)	220 (27.5)
4+	110 (27.5)	163 (40.8)	273 (34.1)
Educational Status			
Illiterate	29 (7.3)	89 (22.3)	118 (14.8)
Primary	114 (28.5)	149 (37.3)	263 (32.9)
Secondary	118 (29.5)	105 (26.3)	223 (27.9)
Graduation and above	139 (34.7)	57 (14.1)	196 (24.5)

Figures in parentheses denote percentages.

Table 1A gives detailed information regarding age, place of residence, religion, marital status, number of children and educational status of the respondents of this study. The data presented in the above table clearly reflects the prominence of widowhood among the elderly. The literacy level among the respondents is very high and illiteracy is found to be higher among elderly women (22.3%)

Quality of Life of the Elderly

All the respondents in this study were classified in to three groups based on their over all scores obtained by them from the assessment scale. Those who obtained scores less than 160, out of the total score 400, were grouped under "Low" quality of life group; those having the scores between 160–320 were grouped under "Medium" quality of life group; and those who obtained scores above 320 were grouped under "High" quality of life group.

Table 1
Quality of Life of the Elderly

Quality of Life	*Scores*	*No: of Respondents (400) Female (400)*		*Total (800)*
Low	< 160	4 (1.0)	1 (0.3)	5 (0.6%)
Medium	160–320	220 (55.0)	314 (78.5)	534 (66.8)
High	320–400	176 (44.0)	85 (21.2)	261 (32.6)

Figures in Parentheses Denote Percentages.

It was found that 66.8 per cent of the respondents enjoy medium quality of life; where as 32.6 per cent have high quality of life. Quality of life was found to be high more among elderly men (44%) than elderly women (21.3%).

Comparison of the Elderly Based on Age

Table 2
Comparison of Quality of Life Based on Age

Age (in years)	*Mean*	*SD*	*N*	*F*	*Sig*
60–69 (A)	307.6	32.5	469	13.37**	0.000
70–79 (B)	299.0	49.1	249		
80 + (C)	285.2	32.4	82		

** Significant at 0.01 per cent level.

On comparing the quality of life of the elderly based on their age group, it was evident that there is significant variation in the quality of life of the elderly among different age groups, and was found to be high among the age group of 60–69 years (Mean value 307.6). The results also show that as age increases the quality of life decreases and this variation in the quality of the elderly among different age groups is found to be statistically significant (F value 13.37) at one per cent level. Thus the null hypotheses: "Quality of life of elderly is not related to age" is rejected. This means that there is significant difference in the quality of life of the elderly at different age groups.

Quality of Life of the Elderly Based on Gender

Gender is a very important variable that influences quality of life at all ages. Kerala is the only state in India, where women out number men at all ages. Table 3 gives the comparison of quality of life of the elderly based on gender.

Table 3
Quality of Life Based on Gender

Gender	*Mean*	*SD*	*N*	*t*	*P*
Male	309.8	42.6	400	5.27**	0.000
Female	295.5	33.7	400		

** Significant at 0.01 per cent level.

The gender wise comparison of the quality of life of the elderly shows that quality of life was found to be high among elderly men (Mean value 309.8), than that of elderly women (Mean value 295.5). This means that better quality of life was found among elderly men than elderly women and this difference in the quality of life among the genders is statistically significant at one per cent level against the't' value 5.27.

The high level of quality of life among the elderly men may be due to better socio economic standards as compared to their female counterparts. More over, elderly women are more likely to have more psychological problems that have roots in their personal, family, economic and social life. This may be the major reason for low quality

of life among elderly women. Hence the null hypothesis (H2): "Quality of life of elderly is not related to gender", is rejected.

Quality of Life of Elderly Based on Place of Residence

The quality of life of the elderly is compared based on the place of residence of the elderly and is depicted in Table 4.

Table 4
Quality of life Based on Place of Residence

Place	*Mean*	*SD*	*N*	*t*	*P*
Rural	297.0	40.5	592	7.06**	0.000
Urban	318.6	29.1	208		

** Significant at 0.01 per cent level.

Results from the table reveal that on comparing the quality of life of the elderly based on their place of residence, elderly people living in urban areas were having better quality of life (Mean value 318.6), than rural elderly population (Mean value 297.0), and this means that there is significant difference in the quality of life of the elderly based on place of residence.

Better quality of life among the urban elderly may be due to the availability of better infra structural facilities and urbanization. According to Hellstrom and Hallberg (2001), quality of life has a major influence on where people choose to live. Urbanization has a greater impact on the quality of life of the people, as it provides a wide range of diversity, cultural experiences, job opportunities, better infra structural facilities, amenities, health care, etc.

Quality of Life of the Elderly Based on the Educational Status

It is generally believed that the level of education has some influence on the attitudes as well as quality of life of an individual. It can be thus taken as a variable for exercising some control over a person's quality of life. Comparison of the quality of life of the elderly based on their educational status is presented in Table 5.

Table 5
Quality of Life Based on the Educational Status

Educational Status	*Mean*	*SD*	*N*	*F*	*Sig.*
Illiterate (A)	277.4	37.8	118	45.25**	0.00
Primary (B)	294.2	32.1	263		
Secondary (C)	308.8	34.6	223		
Graduation and above (D)	322.1	41.6	196		

** Significant at 0.01 per cent level.

It is evident that, the well being of any person is intimately linked with their educational records because; education enables greater adaptability to changing socio economic conditions, there by ensuring a better quality of life.

While comparing the quality of life of the elderly based on their educational status, it was found that when educational level of the sample increases, quality of life enjoyed by them also increases. Illiterates had low quality of life (Mean value 277.4) wereas graduates and above had high quality of life (Mean value 322.1). This finding proves that the quality of life increases when educational level of a person increases, is found to be statistically significant with the help of ANNOVA test. The 'F' value obtained against these mean values shows that the quality of life of the elderly becomes high when educational status is high and is significant at one per cent level.

Post Hoc Comparison Using Scheffe's Test

Scheffe Multiple Comparison		
Pair	*F*[1]	*P*
A & B	5.9	< 0.01
A & C	19.4	< 0.01
A & D	37.7	< 0.01
B & C	6.6	< 0.01
B & D	22.5	< 0.01
C & D	4.8	< 0.01

Scheffe Multiple Comparison (Post hoc test) was used to compare the mean scores of the quality of life of elderly based on their educational status. This evokes six comparisons; between illiterate (A) and those having primary education (B); illiterates (A) and those having secondary education (C); illiterates (A) and those having graduation and above (D); between those having primary education (B) and those having secondary education (C); between primary education (B) and those having graduation and above (D) and between those having secondary education (C) and those having graduation and above (D). A set of two pairs were taken at a time to find out the significant mean difference that exist between the groups. The quality of life of the elderly based on educational status statistically differs at one per cent level at all the pairs of comparison. This means that quality of life of elderly differs significantly according to their educational status.

Quality of Life of the Elderly Based on the Employment Status

Employment status plays a crucial role in determining the quality of life and well-being of the elderly. A secure income in the adult age will definitely help them to have a sound financial stability in their old age, which would provide the elderly with the liberty to make choices and have preferences and maintain some control over their life, which is again very crucial for a better quality of life. The comparison of the quality of life of the elderly based on their employment status is given in Table 6.

Table 6

Quality of Life Based on the Employment Status of the Elderly

Employment Status	*Mean*	*SD*	*N*	*F*	*Sig.*
Had been working- and now retired	317.6	38.3	273		
Still working	307.0	41.4	129	43.05**	0.000
Never worked	290.9	34.8	398		

** Signifiant at 0.01 per cent level.

Regarding the employment status, it was evident from the above table that, those elderly who were working in their active life and retired thereafter, had a better quality of life (Mean value 317.6), than the other two groups. This means that there is significant difference (F

43.05) in the quality of life of the elderly among the employed and the unemployed. This means that work offers opportunities for socialization with peers and younger persons and for continuous learning, there by maintaining positive self-esteem. This in turn gives the older persons a sense of meaningfulness in life. Earnings from employment, assets and pensions and the social security that one gains from his adulthood employment assures more security towards old age and improves their quality of living.

Quality of Life of the Elderly Based on the Family Income

Poor quality of life is a reflection of low and unsteady income. Family income includes earnings or salary of the respondents, spouse, other members of the family and income from other sources.

Table 7
Comparison of Quality of Life Based on the Family Income of the Elderly

Family Income (Rs)	*Mean*	*SD*	*N*	*F*	*P*
Rs <3,000	284.5	31.1	115	30.17**	0.000
Rs 3,000–Rs 5,000	301.1	267	212		
Rs 5,001–Rs 10,000	312.8	26.5	206		
Above Rs 10,000	317.3	49.6	173		
No income	276.6	49.5	94		

** Significant at 0.01 per cent level.

From the table, it may be noted that, quality of life is found to be high among those having high family income (Mean value 317.3). Similarly low quality of life is seen among those having no income at all (Mean value 276.6). Such elderly are dependent on their care takers completely. This finding shows that there is significant difference in the quality of life of the elderly based on income (F value 30.17).

This finding may be explained on the ground that, the financial and economic well-being of elderly is closely associated with their living conditions. Steady income is a pre determined factor for ensuring a stable economic condition, there by promising better living conditions and improved quality of life.

Quality of Life of the Elderly Based on the Person with whom the Elderly Stays

Quality of life of the older people is influenced by several factors such as age, socio-economic conditions, health status and family living. Families are becoming nuclear, smaller due to urbanization and are always not able to care for older persons. There is still a strong cultural pressure to 'look after' the parents in the family. Hence the person, with whom the elderly stays, has a definite role in determining the quality of life of the elderly and is discussed in Table 8.

Table 8
Quality of Life Based on with whom the Elderly Stays

Staying with whom	*Mean*	*SD*	*N*	*F*	*P*
With Spouse	312.7	38.9	292	16.46**	0.000
With Children	290.5	30.3	220		
Alone	297.5	33.3	59		
Others	267.9	90.8	22		
With Spouse and Children	306.5	34.5	207		

** Significant at 0.01 per cent level.

As is evident from Table 4.3.8, the quality of life of the elderly was found to be high among those who live with their Spouse (Mean value 312.7), followed by those who live with spouse and children together, i.e. with their family (Mean value 306.5). Quality of life was found to be low among those who live with others, which means that those who were living with their relatives, may probably not be getting the desired personal care (Mean value 267.9). This difference in quality of life based on the person with whom the elderly lives is found to be statistically significant at 1 per cent level (F value 16.48).

This result is in agreement with the findings of Basu (2000), in his study on the role status and relationship of elderly women in the family. According to him, Spouse is the only person who truly understands the needs of the individual and is a psychological support. Hence living with spouse is a major factor in determining the social status and there by the quality of life of an elderly.

Quality of Life of the Elderly Based on the Number of Friends

As one grows older, he gets a strong feeling of being neglected by his own family members. This negligence is bridged to an extend by the company of friendship. Keeping this in view, the quality of life of the elderly has been compared, based on the number of friends they have.

Table 9
Quality of the Elderly Based on the Number of Friends

Number of Friends	*Nean*	*SD*	*N*	*F*	*P*
No friends	284.0	36.5	265	16.48**	0.000
1–3	308.5	37.5	302		
4–6	311.7	38.7	167		
7+	327.1	24.3	66		

** Significant at 0.01 per cent level.

According to Table 9, it is evident that the quality of life of the elderly varies according to the number of friends they have. It was found that when the number of friends increases, the quality of life also increases. Those having more friends had better quality of life (Mean value 327.1) as compared to those having no friends (Mean value 284.0). This difference in the quality of life of the elderly based on the number of friends is found to be statistically significant at 1 per cent level (F value 16.48).

Hellstrom, Persson and Hallberg (2004) in their study on quality of life and symptoms among older people living at home, found that social networking and interaction with friends seem to be significantly related to high quality of life among the elderly. The result shows that as the number of friend's increases, there is a positive and significant impact on the quality of life of the older persons. This finding may be explained on the ground that, the company of friends makes elderly feel more comfortable and relaxed, which can positively affect their mental status, thereby ensuring better quality of life.

Quality of Life of the Elderly Based on their Mobility

Mobility plays an important role in determining the quality of life of the elderly. The more a person can move in and around his

surroundings, the more he will be active. The comparison of the quality of life of the elderly based on their mobility pattern is shown in Table 10.

Table 10
Quality of Life of the Elderly Based on their Mobility

Mobility Pattern	*Overall Quality of Life*						*p#*
	Low		*Medium*		*High*		
	Count	*Per cent*	*Count*	*Per cent*	*Count*	*Per cent*	
Low	3	4.17	61	84.7	8	11.1	3.634**
Medium	2	0.00	238	71.5	93	27.9	
High	0	0.00	235	59.5	160	40.5	

Mann Whitney test was used to find out the significant relationship between quality of life of the elderly based on their mobility pattern. It was found that those elderly who had medium mobility level had better quality of life than those having low mobility level and this difference in the quality of life of the elderly, based on the level of mobility is found to be statistically significant at one per cent level. Thus it was found that there is a significant relationship between the mobility and quality of life of the elderly.

Quality of Life of the Elderly Based on the Overall Problems Faced by them

Quality of life of a person is directly affected by the problems he or she faces in his or her daily life. Hence, a comparison was made to find out the relationship between the problems faced by the elderly and their quality of life (shown in Table 11.)

Mann Whitney test was used to find out the significant relationship between the problems faced by the elderly and their quality of life. Quality of life was found to be high when there are less problems among the elderly and this variation in the level of quality of life of the elderly based on their problems is significant at one per cent level (p # 2.875). It was also found that when psychological problems are low, the quality of life is high and is found to be statistically significant (p # 0.224) at five per cent level.

Table 11
Quality of Life of the Elderly Based on the Problems Faced by Them

Mobility	*Overall Quality of the*						*p#*
	Low		*Medium*		*High*		
	Count	*Per cent*	*Count*	*Per cent*	*Count*	*Per cent*	
Physical problem							
Nil	2	1.7	51	42.1	68	56.2	0.368
Low	1	0.3	241	61.2	15	38.6	
Medium	2	0.8	220	83.7	41	15.6	
High	0	0.0	22	100.0	0.	0.0	
Psychological problems							
Nil	3	2.3	79	59.4	51	38.3	0.224*
Low	2	0.3	439	67.4	210	32.3	
Medium	0.0.0	14	100.0	0	0.0		
High	0	0.0	2	100.0	0	0.0	
Financial problem							
Nil	4	0.7	327	57.8	235	41.5	0.718
Low	1	0.7	327	57.8	235	41.5	
Medium	0	0.0	62	98.4	1	1.6	
High	0	0.0	21	91.3	2	8.7	
Over all problem							
Nil	2	6.3	13	40.6	17	53.1	2.875**
Low	3	0.4	498	66.8	244	32.8	
Medium	0	0.0	21	100.0	0	0.0	
High	0	0.0	2	100.0	0.	0.0	

Conclusion

An older person's quality of life improves when he or she is productive and feels that he or she is not treated as a burden on the family and society. Socio-economic variables such as education level, employment status, place of residence, family income, companionship, problems faced by them have significant influence on the quality of life of the elderly. Care of the elderly is a challenge, faced by the societies around the world. Kerala stands first in having the highest number of elderly people among the states of India. Even though

Kerala State in India claimed to have high literacy rate, today the elderly face miserable conditions in their life, as they are bonded to the family and not ready to live in old age homes.

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Chronic Morbidity among Elderly Women in an Urban Setting of Tamil Nadu: Patterns and Differentials

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ABSTRACT

Health status is an important factor that has a significant impact on the quality of life of elderly population. In view of this fact the present study was planned to investigate the chronic morbidity among randomly selected 414 elderly women from Coimbatore city (Tamil Nadu). These elderly women were asked individually regarding their health and made to give information about the illness by which they suffer and also the duration of that particular illness. The results show that slightly more than half of the elderly women were suffering from poor vision/cataract and rheumatism/arthritis closely followed by blood pressure. On the other hand, two-fifths (39%) of elderly women were suffering from lung problem, ulcer or gastric, heart disease, nervous disorder, back pain, skin disease, kidney trouble, dental problem and tuberculosis. Elderly Women who were suffering from 1 and 2 or more chronic morbidities were significantly ($p < 0.01$) higher among old-old in age than the young-old respondents. Women who were widows, had two or more sons and were living with children/others also appeared to be suffering from more number of chronic problems than their counterparts. Conversely, the number of women who were suffering from chronic morbidities was lower among those who were educated up to high school and above; they belonged to

higher income family brackets and higher Standard of Living Index of households than those who were illiterates, and belonged to lower income family group and low SLI of households. On the basis of these findings the author also suggested suitable policy implications for future health related planning for elderly women.

Key word: Chronic Morbidity, Elderly Women, Differentials

Health status is an important factor that has a significant impact on the quality of life of elderly population. The major elements of health status are perceived health, chronic illnesses, and functional status. As age advances, due to deteriorating physiological conditions, the body becomes more prone to illness. The illnesses of the elderly are multiple and chronic in nature. Aged women tend to be less healthy than their male counterparts. Their living conditions are not conducive to good health. Compared to their wealthier peers, they are more likely to be living alone, to have inadequate diets, to have lesser access to information about how to maintain their health and to have fewer physician contacts per year (Van Mering and O'Rand 1981; Hooman and Kiyan, 1988).

In India, so far very few large-scale national surveys have been carried out to understand the magnitude and pattern of chronic problems among the elderly women population. Some of the latest empirical studies (mostly from the year 2000) have been reviewed here. Dilip (2003) in his study (which was based on the analysis of 52nd round of National Sample Survey, 1995–96 data of 2,212 elderly persons – 1,338 from rural areas and 874 from urban areas), noticed that the prevalence rate of major chronic diseases was 675 (per 1,000 persons); the rates were comparatively higher in the case of cough, joint problems and blood pressure than in the case of piles, heart disease, urinary problems and diabetics. The clear pattern of higher prevalence rates of all the chronic diseases under consideration were noticed among old-old (70+ years) than young-old (60–69 years). However, such differentials in these rates were not consistent by their gender, marital status, monthly per capita consumer expenditure of households and economic independence status. Sushma *et al*., (2004) in their study at Hisar district, Haryana among 150 aged widows noticed that more than 90 per cent of the respondents had general weakness,

problems of eyesight, teeth and forgetfulness. Nearly two-thirds of them had problems of arthritis and insomnia. With regard to serious ailments, 45 per cent of the aged widows had asthma followed by mental anxiety (33%), heart disease (21%), blood of pressure (19%), paralysis (13%) and diabetes (5%). An analysis of data of aged persons (60+ years) from the 42nd and 52nd rounds of the National Sample Surveys (1986–87 and 1995–96) in India by Goyal (2004) revealed that chronic diseases were higher among women compared to men. Most elderly were suffering from joints pain (39% females and 28% males, respectively). About one-fourth were suffering with high blood pressure, cough and heart problems.

Based on a study of 750 elderly persons (450 from rural and 300 from urban cetres of three districts in Tamil Nadu), Audinarayana (2005) articulated that a greater proportion of the respondents were reported to be suffering from chronic morbidity (80%). By and large, visual complaints seem to be the most mentioned chronic morbidity (53%), followed by rheumatic complaints and blood pressure (15% each), diabetes (13%) and digestive complaints (11%). While visual and rheumatic complaints as well as blood pressure appear to be higher among the males as against females, digestive problems and diabetes seem to be higher among males than females. In general, the percentage of respondents suffering from various chronic illnesses gives the impression of increasing prevalence of chronic morbidity with their current age. Logistic regression analysis on chronic morbidity revealed that the odds ratio appeared to be increasing with their current age (1.1; $p < 0.001$) and noted to be higher among those educated up to primary school and middle school and above (1.6 and 1.7; $p < 0.10$ in each case) than their counterparts, whereas such association was opposite in the case of those who earn higher income per month (0.6; $p < 0.01$) than those who had no income. Chakrabarti's (2006) study in a multi-ethnic rural setting, West Bengal state revealed that the prevalence of chronic diseases like gastro-intestinal, blood pressure and asthma was higher followed by eye complaints and pain in limb joints. Conspicuously, while the prevalence of blood pressure did not vary much as per gender background, asthma and respiratory diseases were higher among males as against females, the opposite pattern was observed in the case of the other three chronic diseases.

A micro-level study in Orissa (Mohanty, 2007) among 108 aged women, (55 spouses of pensioners and 53 spouses of non-pensioners), revealed that about fifty per cent were suffering from one aliment/disease, whereas one-third were suffering from multiple ailments/diseases. This percentages was comparatively higher among those women whose spouses were pensioners. In the case of individual aliments/diseases, it was noticed that one-fifth to one-tenth of the aged were suffering from arthritis, weak eye sight, high blood pressure, constipation, giddiness, waist/back pain, hearing problem, piles, low blood pressure and asthma. Less than one-tenth were suffering from cold and cough, gastric, heart problem and dental problem. By and large, the aged women who were spouses of non-pensioners were suffering more from all these diseases than the spouses of pensioners. Rao's study (2007) in Andhra Pradesh showed that more than fifty per cent had minor illness and around one-tenth had serious illness; women had an edge over men in this regard. When enquired about individual morbid conditions, a large majority of women as against men suffered from joint pains followed by weakness (69% & 31% and 60% & 23%, respectively). However, the proportion of elderly who suffered from nervous disorders, heart problems, asthma and skin diseases was moderately higher among men than among women. Another study in Andhra Pradesh by Swarnalatha (2008) revealed that a greater proportion of elderly rural women (87%) had one or more morbid conditions. The major morbid conditions suffered by the elderly enumerated were: eye problems, dental problems. anaemia and musculo-skeletal disorders (in the range of 80%–56%). The next in the order were: cardio-vascular disorders, ear problems, oral cavity diseases and (ranging between 45%–30%). Few of them suffered from other morbid conditions like nervous disorders, gastro-intestine diseases, respiratory, skin, endocrinal and genito-urinary disorders (in the range of 11.5%–5%). Sheela and Jaymala (2008) found out that out of 333 elderly women in Coimbatore city, Tamil Nadu state slightly less than half of the elderly (49%) were suffering from joint pains followed by one-third from blood pressure and 17 per cent from diabetes. Based on a primary data of 500 elderly persons belonging to Amaravati district of Maharashtra, (Bansod and Paswan 2011) it came

to light that about 13 per cent of elderly suffered from asthma/breathing problem, 8 per cent from blood pressure, 5 per cent from diabetes, 2 per cent from heart, kidney and lung problems and about 7 per cent from others like arthritis, back pain, liver damage, piles, paralysis and T. B. Logistic regression analysis on health problems (having one or the other health problem and not having any problem) highlighted that elderly in their 80s (widowed/widowers and economically independent) were more likely to suffer from one or the other health problem than their counterparts. On the other hand, it was observed that elderly living with family were less likely (and significant) to have health problems than those living alone. Based on survey study in Kosovo among 1890 elderly persons aged 65 and above, Jurlie *et al.*, (2013) examined that the most common chronic morbidity were cardiovascular diseases (63%) followed by stomach and liver (21%), diabetes (18%), lung and neurological disorder (16%) and very few suffering from cancer. Logistic regression analysis found that at least one chronic condition is significantly ($p < 0.001$) higher among women, oldest old, not educated, poor, self perceived poor, unable to access medical care. More or less similar pattern is noticed among those elderly who were suffering from multimorbidity.

All these earlier evidences clearly show that the problem of chronic morbidity of elderly of both the sexes, was jointly addressed in many studies but only a few examined the differentials in the chronic conditions across their background characteristics. This study intends to ful-fil these research gaps in knowledge of understanding the chronic morbidity of elderly women with the help of cross-sectional primary data collected from elderly women residing in a well developed city of Tamil Nadu state.

Objectives

1. To study the prevalence of chronic morbidities among the elderly women.
2. To examine the differentials in chronic morbidities among elderly women across their background characteristics.

Method

Sample

Data for the present study were originally collected from 778 elderly persons (60 years or more) from Coimbatore city, Tamil Nadu during 2010.1 The elderly were selected (on census basis) from 8 clusters (streets or parts of streets, which were selected on the basis of simple random sampling technique), belonging to 4 Wards (out of 72 wards) in Coimbatore Municipal Corporation. Of these, only responses of 414 elderly women (Married: N=62 and widows: N= 352) were selected for the present paper.

Tools Used

1. Interview schedule and 2. Standard of Living Index of the households

The interview schedule, containing both structured and open ended questions was developed for eliciting information from the respondents. The interview schedule contained questions related to: Background Information, Living Arrangements/Personal Details, Health Condition,(it means t health condition of the elderly women at the time of survey, whether the respondent is suffering/not suffering with any chronic diseases and related issues), Social, economic and Emotional Support, Instrumental Activities of Daily Living Scale and Opinion and Expectation of the Aged.

Standard of Living Index (SLI): This is mostly used as proxy measure of economic conditions of households. For this measure, the following housing conditions, amenities and consumer goods available in the households are considered and assigned the scores:

Type of House – Hut = 0, Kutcha = 2 and Pucca = 3)

Source of Drinking Water – Well = 0, Street Tap = 2 and Own Tap = 3

Availability of Bathroom Facility – No = 0, Others = 1, Outside House = 2 and Within House = 3

Availability of Toilet Facility – No = 0, Others = 1, Outside House = 3 and Within House = 3

Type of Cooking Fuel – Firewood = 0, Kerosene = 2 and LPG = 3

Electrification of House – No = 1 and Yes = 2

Availability of Radio, Bicycle, Fan and Sofa/Dining Table – No = 0 and Yes = 2

Availability of LPG connection, TV, Scooter/Motor cycle, Refrigerator and Telephone –

No = 0 and Yes = 3

Availability of Motor Car – No = 0 and Yes = 4

This measure is a simple cumulative number of scores from which the households are categorised into three SLI groups, viz., Low, Medium and High (Table 4).

These elderly women were individually interviewed with the help of interview schedule.

Analysis of Data: The analysis of data was carried out in the following manner: Firstly, the prevalence of morbidity among the elderly women was showed with the help of simple frequency tables. At the next stage the data showed the differentials in the prevalent of morbid condition or the differentials in the prevalent illness in elderly women keeping in mind their background characteristics which were analysed making use of cross-tabulations with chi-square test of significance.

Findings and Discussion

Patterns of Chronic Morbidity Conditions among Elderly Women

Information provided in Table 1 reveals that more than half of the elderly women are suffering from poor vision/cataract and rheumatism/arthritis followed by blood pressure. A sizeable per cent of elderly women is suffering from frailty/general weakness and diabetes. On the other hand, about two-fifths of the elderly women are suffering from various chronic morbidities like lung problem/asthma, ulcer or gastric problem, heart disease, nervous disorder, backpain/slipped disc, skin disease, kidney problem, dental problem and tuberculosis.

Table 1
Chronic Morbidity of the Elderly Women

(N = 414)

Nature of Chronic Morbidity	*Age (in years)*				*Total*	
	60–69		*70+*			
	%	*N*	*%*	*N*	*N*	*%*
Poor Vision/Cataract***	48.1	104	51.9	112	216	52.2
Rheumatism/Arthritis	54.5	116	45.5	97	213	51.2
Blood Pressure**	48.3	84	51.7	90	174	42.0
Frailty/General Weakness	54.6	53	45.4	44	97	23.4
Diabetes	53.2	42	46.8	37	79	19.1
Others* (Lung Problem/Asthma, Ulcer or Gastric Problem, Heart disease, Nervous Disorder, Back pain/Slipped Disc, Skin disease, Kidney trouble, dental problem and tuberculosis)	49.4	80	50.6	82	162	39.1

Note: Percentages calculated for the Chronic Morbidities by their age row-wise.
Percentages calculated for the Total Sample of Elderly Column-wise
Multiple Chronic Problems and hence, the totals of each category would be more than 100 per cent.
For each Nature of Chronic illness, the Chi-square test of significance. Results are given in superscript.

*,**,*** = Denote the Chi-square results are significant at 0.05, 0.01, 0.001, respectively.

Patterns of Individual Chronic Morbidities Across the Age-groups

Generally, health status of the persons is closely associated with their age; especially this is true in the case of elderly persons among whom current age and disease are synonymous. Such situation mainly arises because of weakening in the functions of human organs with age and thereby, such elderly fall prey to one or the other disease. Data provided in Table 1, highlights the percentage of elderly women suffering from poor vision/cataract and blood pressure higher among those in the age at 70 years or older as against those in the age group of 60–69 years. These differentials turn out as highly significant ($p < 0.001$ and $p < 0.01$). Such trend is also noticed to a moderate extent ($p < 0.05$) in the case of those suffering from various other problems like lung problem/asthma, ulcer or gastric problem, heart disease, nervous disorder, backpain/slipped disc, skin disease, kidney problem,

dental problem and tuberculosis. Conversely, the percentage of elderly women suffering from chronic morbidities like rheumatism/arthritis, frailty/general weakness and diabetes is higher among young-old than middle-old but none these turned out as significant. All these figures clearly exhibit that chronic morbidities appear to be a part of life of elderly women when they become too old.

Differentials in Chronic Morbidities Across Women's Background Characteristics

In this section, an attempt has been is made to examine the differentials in chronic morbidity conditions of the elderly women by their background characteristics. For this purpose, all the women, based on the pooling of all chronic morbidity conditions, have been categorised into three groups, viz., elderly not suffering any morbid condition, suffering from only 1 morbid condition and suffering from 2 or more morbid conditions. Data provided in Table 2, indicates that about 44 per cent are suffering from one morbid condition and another 43 per cent from two or more morbid conditions. Rest 13 per cent of elderly women are not suffering from any morbid conditions.

Table 2

Percentage Distribution of those Elderly Women who are Suffering or Not Suffering from Chronic Morbidities across their Age Groups

Current Age of Elderly Women	*Not Suffering any Chronic Morbidity*		*Suffering from only 1 Chronic Morbidity*		*Suffering from 2+ Chronic Morbidities*		*Total*
	%	*N*	*%*	*N*	*%*	*N*	*N*
Current Age (in years)							
60 – 69	17	39	44.5	102	38.4	88	229
70 – 79	10.3	13	44.4	56	45.2	57	126
80 +	5.1	3	39	23	55.9	33	59
χ^2 *– Value; Sig. Level*			*10.148; p < 0.01*				

Note: Percentages computed for Chronic Morbidities across background characteristics by row-wise.

Differentials in Chronic Morbidity Conditions by Age-groups

Chronic diseases tend to become more common with age. As age advances, a person becomes more vulnerable to diseases due to physiological changes. So higher the age of the elderly women, higher would be the prevalence of chronic morbidity (Audinarayana, 2005; Goswami *et al.,* 2005; Chakraborty, 2006; Bansod and Paswan, 2011). Information presented in Table 2 shows that about 56 per cent of elderly women are suffering from two or more chronic morbidities among those in advanced aged (80+ years) followed by 45 per cent among those in the age group of 70–79 years as against 38 per cent among young-old. Thus as expected, an increase the age tend to an increase in the multiple chronic diseases. On the other hand, such pattern has become opposite in the case of those who are not suffering from any chronic morbidity. These percentage differentials are also turned out as highly significant ($p < 0.01$).

Differentials in Chronic Morbidity Conditions by Marital Status

Marital status of the elderly is another socio-demographic indicator that is expected to determine the chronic morbidity of the elderly women. It is presumed that those elderly who are currently married have an advantage of getting necessary support from the spouse in facing various health problems. Such support from the spouse is more important during the periods of ill-health of the elderly, because of the limited role the other family members play in such situations. Conversely, widowed women have the disadvantage of living alone mostly/or with children/others who may not have sufficient time to take care of them during ill-health. Under these circumstances, it is expected that the magnitude of chronic morbidity conditions would be higher among the widowed women than the currently married women (Dilip, 2003; Goswami *et al.,* 2005; Chakraborty, 2006; Bansod and Paswan, 2011). From panel 1 Table 3, it is interesting to note that a higher percentage (45%) of elderly women is suffering from two or more chronic morbidities among those who are widowed as against married women. Reverse pattern is noticed in the case of those who are not suffering from any chronic morbidity. These percentage differentials also turn out significant, but to a lesser extent ($p < 0.10$).

Table 3
Percentage Distribution of these Elderly Women Suffering from Chronic Morbidities in terms of their Marital Status and Caste Background

Marital Status and Caste Background of Elderly Women	*Not Suffering any Chronic Morbidity*		*Suffering from only 1 Chronic Morbidity*		*Suffering from 2+ Chronic Morbidities*		*Total*
	%	N	%	N	%	N	N
1. Marital Status							
Marr./Sig./Sep./Div	19.4	12	50	31	30.6	19	62
Widows	12.2	43	42.6	150	45.2	159	352
χ^2 – *Value; Sig. Level*			*5.267; $p < 0.10$*				
2. Caste							
SCs/STs	9.6	10	44.2	46	46.2	48	104
MBCs/BCs	13.6	33	43.6	106	42.8	104	243
FCs	17.9	12	43.3	29	38.8	26	67
χ^2 – *Value; Sig. Level*	*NS*						
Total	13.3	55	43.7	181	43	178	414

Note: Percentages computed for Chronic Morbidities across background characteristics by row-wise.

Differentials in Chronic Morbidity Conditions by Caste Background

In Indian context, caste is an important social stratification factor, which has an immense influence on their walks of life. Generally, the socio-economic status of the persons would depend upon the caste to which they belong. Members of scheduled castes/tribes (SCs/STs), who are poor in their socio-economic conditions followed by most backward castes (MBCs), backward castes (BCs) and would not be in much better condition than those belonging to forward castes. Therefore, it can be presumed that persons from the latter caste group will take care of their health in a better way by taking nutritious food and following healthy habits (both preventive and curative) than those belonging to the former caste groups. Under these circumstances, it is expected that elderly belonging to SCs/STs and MBCs/BCs may suffer from more chronic morbidities than those who are from FCs. Data provided in panel 2 of Table 3 shows that 46 per cent of elderly women among those who belonged to SC/ST groups suffered from two or more morbidities closely followed by 42 per cent among those who

belonged to MBC/BC communities as against 38 per cent among those who belonged to forward castes. Conversely, the reverse pattern is noticed in the case of those who are not suffering from any chronic morbidity across the caste groups under consideration. However, these results didn't turn out statistically significant.

Differentials in Chronic Morbidity Conditions by Educational Status

Education helps a person to develop healthy lifestyle and improve his/her knowledge on the ways to maintain good health. It helps in getting adequate information about health problems and availability of health care centre to seek medical treatment during illnesses. Besides its direct effect on health status, education is expected to influence factors like, economic status, perception of living status, degree of 'feeling idle', anxieties and worries and type of health centre visited, indirectly. In view of these contentions, it is expected that higher the level of education of the elderly, lesser the prevalence of chronic morbidity (Audinarayana, 2005; Chakraborty, 2006). Information given in Table 4 (panel 1), highlights that, on the whole, the prevalence of elderly women suffering from two or more chronic morbidities are lower among those who are educated up to high school and above than those who are illiterate. Conversely, the prevalence of those not suffering from any chronic morbidity is higher among high school and above as compared to illiterates. These differentials are significant to a moderate extent ($p < 0.05$).

Table 4

Percentage Distribution of those Elderly Women Suffering from Chronic Morbidities as per their Socio-economic characteristics

Educational Status, Monthly Family Income and SLI of Households	*Not Suffering any Chronic Morbidity*		*Suffering from only 1 Chronic Morbidity*		*Suffering from 2+ Chronic Morbidities*		*Total*
	%	*N*	*%*	*N*	*%*	*N*	*N*
1. Educational Status							
Illiterate	12.9	33	43.4	111	43.8	112	256
Up to Middle School	9.2	9	42.9	42	48	47	98
High School and above	21.7	13	46.7	28	31.7	19	60
χ^2 – *Value; Sig. Level*			*7.974; p < 0.05*				

Cont'd...

Cont'd...

2. Monthly Family Income							
= 5,000	9.5	18	43.9	83	46.6	88	189
5,001 – 10,000	17.3	18	35.6	37	47.1	49	104
10,001 +	15.7	19	50.4	61	33.9	41	121
χ^2 – *Value; Sig. Level*				*9.936; p < 0.01*			
3. SLI of Households							
Low	8.6	10	46.6	54	44.8	52	116
Medium	16.5	29	36.4	64	47.2	83	176
High	13.1	16	51.6	63	35.2	43	122
χ^2 – *Value; Sig. Level*				*9.898; p < 0.01*			
Total	13.3	55	43.7	181	43	178	414

Differentials in Chronic Morbidity Conditions by Economic Status

Income of the elderly is expected to be very important in determining their health status. Availability of adequate financial resources for the elderly not only enables them to get proper medical aid but also helps in constant monitoring of their health conditions. The monthly family income of the elderly has an important bearing on their health as, with higher level of income, an individual can get a higher level of nutritional status and better health care. In the present study, standard of living index of the households is also considered as another proxy for economic status of the elderly (Audinarayana, 2005; Chakraborty, 2006). The magnitude of elderly suffering from two or more morbid conditions is much lower among those who belong to households that have higher monthly family income and higher standard of living index (SLI) than those who are residing in households of moderate and low monthly family income brackets (panels 2 and 3 of Table 4). On the contrary, the reverse pattern is noticed in the case of those who are not suffering from any chronic morbidity. These percentage differentials also turn out to be highly significant ($p < 0.01$).

Differentials in Chronic Morbidity Conditions by Living Arrangements

Living arrangements of the elderly with their children is another important factor that may influence their health status. By and large, there is a possibility that the health status of the elderly would be much better if they are living with their children and have more

number of sons (Chakraborty 2006; Bansod and Paswan 2011). This may be because the younger ones may spend some money as soon the elderly fall sick. One can also argue against this pattern that because of ill-health only elderly would co-reside with their sons/children and/or the younger ones may not take proper care due to lack of time and busy schedule of daily activities. From Table 5 (panel 1 and 2), it is evident that the percentage of elderly women suffering from two or more chronic morbidities conditions is higher among those who have two or more number of sons and are living with children rather than those who have no children and are living alone/themselves (with spouse). An exact reverse pattern to this is observed in the case of those elderly who are not suffering from any morbidity condition. These percentage differentials are noted as significant ($p < 0.10$).

Table 5

Percentage Distribution of those Elderly Women by who are Suffering from Chronic Morbidities due to Living Arrangements

No. of Sons/Living Arrangements	*Not Suffering any Chronic Morbidity*		*Suffering from only 1 Chronic Morbidity*		*Suffering from 2+ Chronic Morbidities*		*Total*
	%	*No*	*%*	*No*	*%*	*No*	*%*
1. Son(s)							
0	9.6	9	45.7	43	44.7	42	94
1	17.3	27	47.4	74	35.3	55	156
2 +	11.6	19	39	64	49.4	81	164
χ^2 – *Value; Sig. Level*			*8.434; p < 0.10*				
2. Living Arrangements							
Alone/Themselves	19.8	18	45.1	41	35.2	32	91
Children/Others	11.5	37	43.3	140	45.2	146	323
χ^2 – *Value; Sig. Level*			*5.415; p < 0.10*				

Note: Percentages computed for Chronic Morbidities across background characteristics by row-wise.

Conclusion and Suggestions

For the foregoing analyses and discussion, it is evident that in the sample urban setting (Coimbatore city) of Tamil Nadu, a greater percentage of elderly women are suffering from one or the other chronic morbidity conditions – 44 per cent with only one chronic morbidity, 43 per cent from two or more chronic morbidities. The

prevalence of eye problem, rheumatism/arthritis and blood pressure appear to be the major chronic morbidity among the sample elderly. The prevalence of elderly women suffering from two or more chronic morbidities is comparatively higher among old-old, widowed and those belonging to scheduled caste/tribe communities than their counterparts. Conversely, the prevalence of elderly women suffering from higher number of chronic morbidities is lower among those who have higher education or belong to households of higher monthly family income and have higher standard of living index (SLI). All these results statistically emerged as highly significant, except in the case of educational status. Further, the percentage of elderly women are suffering from two or more chronic morbidities is higher among those who have more number of sons and living with children/others.

In the light of these findings, some of the following policy implications are presented. First of all, the elderly have to be educated to take preventive measures at the earliest, when the morbid condition crop up. Necessary steps may be initiated to establish geriatric wards in government hospitals initially at least at district and taluk headquarters. Strategies also may be evolved to organise medical camps for those elderly who are residing in slums and semi-urban areas, for which wide publicity may be given to make use of such facilities by the elderly. There is a need to encourage adults to save and/or invest in a proper fashion while they are earning, which would be much useful during their old age when they are not earning. Finally, those who are suffering from chronic morbidity conditions may be given concessions in transportation to visit hospitals with at least one accompanying person by the government.

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Health and Psychosocial Complaints of Elderly Albinos in Ondo State, Nigeria

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ABSTRACT

Albinos experience a lot of health complaints and also experience social segregation in many aspects of life. This study examines the health and psycho-social problems that are associated with elderly albinos in Ondo state, the study examines the specific experiences, feelings, coping strategies, cultural influences and attitudes of the society to elderly albinos, as well as medical/nursing benefits that are available for them. The study adopted descriptive exploratory approach. The participants were 75 purposely selected elderly albinos from 8 randomly selected local government areas in all the 8 dialectical groups in the state whose ages averaged 70.25 years with a range of 60–92 years. Quantitative and qualitative data were collected with the use of interview guide that was tested for validity and reliability using test and re-test method. Data from the study were analysed using descriptive and inferential methods along with content analysis of the in-depth interview. The result

indicated that elderly albinos complained of visual problems like impaired visions nystagnius, strabismus, photophobia, astigmatism, farsightedness, nearsightedness as well as general trend of social problems like harassment, abandonment, neglect, withdrawal, isolation, rejection, divorce, labeling stigmatization, suspicion, frustration and limited opportunities. It was also found that psycho-social supports of the elderly albinos are related to age, and conventional education. Furthermore, elderly albinos from one albino parent (homozygous albinos) had better health status than those from two albino parents (heterozygous albinos). Similarly, it was revealed that there is no significant difference in health status of male and female elderly albinos. Conclusively, the health status and psycho-social support of elderly albinos was mostly affected by age, level of psycho-social support, influence of conventional education, sex as well as the type of albino coupled with some varying degrees of common ailments being experienced by them.

Keywords: Health status, Elderly albino, psychosocial support.

"Albinism" refers to a group of inherited conditions. People with albinism have little or no pigment in the eyes, skin and hair (or in some cases in the eyes alone). They have inherited from their parents an altered copy of a gene that does not work correctly. The altered gene does not allow the body to make the usual amounts of a pigment called melanin. Albinism occurs in all races of mankind, among mountainous as well as lowland dwellers, it may be complete or partial (Gunn, 1911).

Albinism is a genetically inherited condition characterized by a deficit in melanin production that leaves albinos with pale skin, usually light, sometimes reddish eyes and blond hair (Newsletter, 2009). It is a disorder that affects individuals and their families medically, socially and psychologically, albinism seems to be most prevalent in sub-Saharan Africa at a rate of roughly 1 to 3, 5,000 (Newsletter, 2009).

There are good numbers of elderly albinos all over the world. But recently the problem has been much realized facing the elderly albinos' society living in Africa. Families having albinos is a stigma, hence drawing little attention on their affairs, including social protection and they also experience social segregation in many aspects

of life, e.g. life skills and education. Moreover when alive, albino society is a victim of witch – craft practice as it is a belief that body parts of albino can increase on their wealth (Gentleman, 2008). Even after death, their body parts which are thought to bring good luck – hair, arms, legs and blood – are used to make portions by witch-doctors. Consequently, graves of the elderly albinistic have to be sealed with cement to discourage grave robbers (Gentleman, 2008).

The operation of Mendelian processes in human heredity is further shown by the close relationship that exists between the appearance of albinos and cousin marriages. Albinism is a genetic disorder; it is not an infectious disease and cannot be transmitted through contact, blood transfusions, etc. Most forms of Albinism are the result of biological inheritance of genetically recessive alleles (genes) passed from both parents of an individual, though some rare forms are inherited from only one parent. There are other genetic mutations, which are proven to be associated with Albinism. All alterations, however lead to changes in melanin production in the body (Boissy and Nordlund, 2006).

Albinism in humans can also be categorized as oculocutaneous albinism and ocular albinism. In oculocutaneous Albinism, pigment is completely missing from the hair, eyes, and skin. In ocular Albinism, only the eyes lack pigment, they have normal skin and hair colour, and many even have a normal eye appearance while there is only one major type of ocular Albinism, there are several varieties of oculocutaneous Albinism (and disorders which produce the same or similar results). Sometimes the eyeballs are pigment-less (pink) and sometimes pigmented (black) (Gunn, 1911).

Social Problems of Elderly Albinos

Albinism may cause social problems because people with Albinos look different form their families, peers and other members of their ethic group. The parents of most children with albinism have normal hair and eye colour for their ethnic background and do not have a family history of Albinism. Likewise the children of elderly albino may look different from their parents.

Africa has one of the highest incidents of albinism in the world. Albino women are prone to rape and sexual violence. Local legends

claim that sexual intercourse with a person with albinism can treat health problems (Newsletter, 2009) and during the election, people believe that if they kill an albino or get part of the body, they will win (Newsletter, 2009).

In Nigeria, child bearing is one of the determinants of stability in the home and comfort to the woman in marriage when such an essence (child) arrives with one type of abnormality but or disability, it is a pointer to or beginning of crisis in such a union, (Fajemilehin, 2003) and this may affect them through adulthood to old age. This has adverse effect on families and a lot of social challenges like increasing number of divorce cases and dumping of abandoned albinos in gutters as a result of neglect, abandonment and harassment received by the mother from the albinos' father and his relations is common. Albinism affects males and females equally, as well as elderly, showing no gender skew, however because human beings can be carrier of genes for albinism without exhibiting any traits of albinism, albinistic offspring can be produced by two non-albinistic parents.

The albinistic are generally as healthy as the rest of their species, with the growth and development occurring as normal, and albinism by itself does not cause mortality (Boissy and Nordlund, 2006), though lack of pigment is an elevated risk for skin cancer especially at old age. Human with albinism commonly have vision problems and it worsens by age, they need sun protection though people with albinism are not blind yet their vision acuity is not normal and can be corrected with glasses. Albinos also face a lot of social challenges, as the condition is often a source of discrimination against them (Wikipedia, 2007)

Cultural Problems of Elderly Albinos

Culturally, among the Yorubas of Nigeria, albinos are believed to be supreme beings "EniOrisa", that people with albinism are thought to have magical powers to be able to tell the future and this has led to the stigmatization of not only the albinos but also the husbands of albino women, that they are "EdumareOkoAfin" which means the husband of an albino women is "supreme god".

Albinism has caused a lot of broken homes in Yoruba society. Culturally, Yoruba people believe in both facial and colour resemblance of their offspring. A wife who gives birth to an albino, is

believed to have committed an abomination of having sex during menstrual period or offended god and a child delivered with albinism is either rejected or neglected.

Albinos at times resemble themselves as their fair skin, red Irises and pale hair have moral portrayal that is very ambiguous and this has caused great destruction because they have been victims of circumstances by being answerable to crimes committed by another albino. Albinos are also called derogatory names that are related to the type of irises, hair, skin colours and these are part of the casual and racial discrimination that elderly persons with albinism are often made to suffer.

Health and Psycho-Social Implications of Albinism on the Aged

Sensory-neural deafness is common among the albinos and it is worse among the aged albinos. Folkolore has developed in Zimbabwe that having sex with a women with albinism, will cure a man of HlV and this has led to many women with albinism being raped, and thus infected by HIV positive men (Newsletter, 2009).

Visual problems of albinos are of paramount importance. Albinism is a condition that cannot be cured or treated per say but small precautions can be taken to prevent it and to improve the quality of life of those affected. It is vital that people with albinism are sun screened when exposed to sunlight to prevent premature skin ageing or skin cancer especially at old age. This poses a problem for the aged who cannot afford sunscreen, especially in Nigeria. So they should be provided with high protective clothing and swimsuits because they are good alternative to excessive use of sunscreen.

Albinos have uncontrollable rolling of the eyes; this condition is one marked by unsteadiness (a sort of flickering rolling) of the eyeballs and it becomes more marked as the endeavour to adjust their accommodation to near objects, worsens with age in elderly albinos (Farabee 1911).

Findings discover the nature, causes of albinism and other ways of improving on existing health education facilities as an instrument for providing baseline information on the cultural influences and attitudes of the society towards elderly people with albinism and proffer ways for positive change. Besides, the findings will assist the

social workers and nurses to understand special needs of the aged people with albinism.

Aim of the Study

This study was conducted to look into the health and psychosocial complaints of elderly people with albinism.

The Objectives of the Study

The specific objectives were to:

1. Assess the health status of the aged people with albinism.
2. Identify the social complaints and coping strategies of the elderly albinos within the selected local government areas.
3. Examine the cultural influences and attitudes of the society to elderly albinos.
4. Document the disorders that are associated with albinism in the aged.
5. Examine the medical/nursing benefits that are available for the elderly albinos.

Hypotheses

1. Educational status of the elderly albinos in Ondo state will determine the psycho – social support for majority of them.
2. The psycho – social support received by majority of the elderly albinos in Ondo state will vary with age.
3. There will be no significant difference in the number of male and female elderly albinos who experience better health status.
4. There will be no significant difference in the number of homozygous and heterozygous elderly albinos who experience better health status.
5. The health status of the majority of the elderly albinos in Ondo state will vary with their age.

Method

The Setting of the Study

This study was carried out in some selected local government areas of Ondo State, Nigeria. The local government areas comprised Akoko North East, Akoko South West, Akure North, lleoluji/Okeigbo, Irele, Ese-Odo, Ondo East and Ose local government.

Stratified random sampling method was used in selecting the 8 local governments by dividing Ondo state into 8 parts based on dialectical groups. Ondo state, is one of the 36 states of Nigeria, geographically, it is in the tropical zone of Africa with seasonal dry and rainy period. The area of land is 1,47,88,723 square kilometers with a population of 21,85,723. The people of the state are predominantly Yorubas. The IjawArogbo and IjawApoi who inhabit some parts of riverine areas of the state are not of Yoruba Origin.

For the purpose of this study, the core of Ondo state was divided into 8 based on dialectical groups which are Akoko, Ondo, Owo, Ose, llaje, Ikale, Akure and !jaw. This was done for the ease of data collection.

Ondo state was selected as the universe of the study because of its numerous cultural orientations and histories of several traditional towns which not only define the original culture of Yoruba race but also possess a very significant number of elderly albinos with outstanding wealth of experiences of albinism.

Design and Participants

The study adopted descriptive exploratory approach to document the experience of the elderly albinos in Ondo State and examine their health status and psychosocial complaints. The participants were 75 purposely selected elderly albinos whose ages averaged 70.25 years with a range of 60–92 years. Twenty-six (34.7%) of the respondents were single parents/divorced, while 2 (2.7%) were widowed. Out of 47 that were married, 32 (68.1%) of the respondents were in polygamous marriage, 15 (31.9%) were in monogamous marriage, 54 (72%) were Christians, 36 (48%) were male while 39 (52%) were female. 19(25.3%) of the respondents that were married

had remarried either as a result of been albino or as a result of the death of their first spouse. Three (4%) of the respondents had no formal education, 11 (14.7%) had primary education, 40 (53.3%) had secondary education and the rest, 21 (28%), had higher education. Twenty (26.7%) were students, 13 (17.3%) of the respondents were self-employed, 12 (16%) were apprentice, 11 (14.7%) were civil servants while 19 (25.3%) were farmers.

Instrument

A structured interview technique was used. The questionnaire comprised four sections of 46 items designed to explore the socio-demographic characteristics, the health and social problems as well as the cultural influences of the society and the coping strategies of the aged albinos. The interview was conducted in English language and also in Yoruba for the less educated respondents; the interview was tape-recorded, transcribed and interpreted afterwards by the researchers. The content validity and reliability of the instrument was established and test, retest co-efficient of 0.84 was established.

Procedure

Eight (8) local governments were purposely selected based on dialect. The headquarters of each local government was used. About 9–10 albinoes were identified for the study in each community (headquarters of the local government) and interviewed. The chief was the first point of contact in the community; he invited Albinoes and introduced the researcher to the respondents. The home addresses and telephone numbers of the albinoes and their chiefs were collected on the first day of the visit; this enhanced the response rate and made them cooperate. After the family heads permitted the researcher to interview the albinoes, the consent of the albinoes to participate in the study was also obtained and confidentiality was assured. Random samplings were used to select the albinoes by casting of lots to pick the selected ones and all the headquarters of the selected local governments were used.

A total of 75 albinoes were interviewed and this cut across the 8 randomly selected local government areas in all the 8 dialectical groups

in the state. Data collection took 24 weeks. One respondent was taken from each family head.

Each respondent through the family head dictated the interview date and time. The elderly albinos were interviewed separately. Each interview session lasted between 20 and 40 minutes (average of 30 minutes).

Data Analysis

The number and percentage of the respondents in each group and response category were determined. Furthermore, Pearson's chi square test was used to assess whether the number of elderly albinos in the category were significantly different with respect to health and psycho-social variables.

Results

As shown in Table 1, the common health problems of the respondents include skin rashes/skin cancer (36%), visual/eye problems (29.3%), hypersensitivity to insect bites (9.3%), premature skin ageing (6.7%), sunburn (6.7%), Hearing impairment (5.3%), injuries from cut (4%) and immuno deficiency (2.7%).

Table 1
Common Health Complaints of the Elderly Albinos

	Ailments	*f*	*%*
1.	Visual\eye problem	22	29.3
2.	Hearing impairment	4	5.3
3.	Skin rashes \ skin cancer	27	36
4.	Immunodeficiency syndrome	2	2.7
5.	Hypersensitivity to insect bites	7	9.3
6.	Sunburn	5	6.7
7.	Injuries\cuts\home accidents	3	4
8.	Premature skin ageing	5	6.7
	Total	75	100.0

The type and frequency of psychosocial complaints of the albinos were also assessed. Table 2 revealed that albinos complained of psycho-social problems such as harassment and nicknames from people 24 (32%), neglect, discrimination and isolation (20%),

disappointment and marital problems (20%), divorce as a result of albinism (9.3%), the fear of being labeled (6.7%), fear of ritualists (5.3%), abandonment and rejection by remove father (4%) and rape/attempted rape (2.7%).

Table 2
Psycho-Social Complaints of the Elderly Albinos

	Psycho-social Complaints	*f*	*%*
1.	Harassment from people\nickname	24	32
2.	Fear of being labeled	5	6.7
3.	Neglect/discrimination \isolation	15	20
4.	Divorce as a result of albinism	7	9.3
5.	Disappointment \marital problems	15	20
6.	Rape\attempted rape	2	2.7
7.	Fear of the ritualists	4	5.3
8.	Abandonment\rejection by father	3	4
	Total	75	100.0

As indicated in Table 3, it was deduced that the most significant strategies of health promotion/maintenance of elderly albinos are good care of oneself (personal and environmental hygiene), no/low salt diet, sun protecting clothing, sun screen, good diet and vision aids/glasses with respective percentages of 21.3 per cent, 20 per cent, 16 per cent, 12 per cent, and 10.7 per cent. Other strategies of health promotion and health maintenance by respondents include medical check-up (8%), moderate exercise (6.7%) and adequate rest (5.3%).

Table 3
Health Promotion and Maintenance Strategies Employed by Elderly Albinos

Categories	*f*	*%*
1. Good care (personal and environment hygiene)	16	21.33
2. Good diet	9	12.00
3. No/low salt diet	15	20.00
4. Adequate rest	4	5.33

Eye complaints of the elderly albinos included Nystagmus (46.7%), photophobia (40%) farsightedness (6.7%), nearsightedness

(1%) with both strabismus and astigmatism, while there was none with total blindness.

Table 4
Visual/Eye Complaints of the A1binoes

	Visual\Eye Complaints	*f*	*%*
1.	Nystagmus	35	46.7
2.	Strabismus	1	1.3
3.	Photophobia	30	40
4.	Farsightedness (hypermetropia)	5	6.7
5.	Nearsightedness (myopia)	3	4
6.	Astigmatism	1	1.3
	Total	75	100

Two (2.7%) of the respondents claimed that culturally people believed that albinos have medicinal properties to heal several illnesses; two (2.7%) of the respondents were using hearing aids and 13.3 per cent claimed that elderly with albinism were degraded and regarded as a curse as a result of the condition in which they were conceived.

A Pearson's chi square test was used to assess whether the psycho-social support of the elderly albinos could be categorized in terms of how educated they were. Table 5 showed the result, 14.7 per cent of the albinos who did not have more than primary school education had poor psycho-social support, while 60 per cent of the elderly albinos who had at least secondary school education reported good psycho-social support. [X^2 (2) = 30.86, P < O.OOl]. Therefore the higher the level of education of the elderly albinos, the higher the psycho-social support received from people. The result in Table 5 also indicted that the elderly albinos who were less than 75 years with poor psycho-social support were 2.7 per cent while the majority 58.1 per cent of those with good psycho-social support were less than 75years of age [x2 (2) = 49.1, P < 0.001] which indicated that psycho-social support of the albinos are related to age hence as the albinos get older their psycho-social support gets reduced and worsens.

Table 5
Summary of Chi-Square Showing the Influence of Conventional Education, Psycho-Social Support and Age of the ElderlyAlbinos

Categories	*f*	*%*	*df*	X^2	*p*
At most primary education/Poor psycho-social support	11	14.7			
At most primary education/fair psycho-social support	1	1.3			
At most primary education/good psycho-social support	2	2.67	2	30.86	< 0.001
At least secondary education/Poor psycho-social support	6	8			
At least secondary education/fair psycho-social support	10	13.3			
At least secondary education/good psycho-social support	45	60			
Less than 75 yrs/poor psychological	2	2.67			
Less than 75 yrs/fair psychological support	3	4.0			
Less than 75 yrs/good psychological	44	58.1	2	49.1	< 0.001
75yrs and above/poor psychological support	16	21.0			
75yrs and above/fair psychological support	8	10.67			
75yrs and above/good psychological support	2	2.67			

Furthermore it was deduced that there was no significant difference in the health status of female albinos and male albinos because 8 per cent of those that were male had poor health status while 10.7 per cent of their female counterpart had poor health status. In addition to these, 21.3 per cent of the male albinos had good health status while 24 per cent of the female respondents had god health status [x^2 (2) = 12.37, P < 0.0001]

Table 6
Summary of Chi-Square Showing Sex, Health Status and Kind of elderly Albinos

Categories	*f*	*%*	*df*	*X2*	*P*
Male/poor health status	6	8			
Male/fair health status	14	18.67			
Male/good health status	16	21.33	2	12.37	< 0.001
Female/poor health status	8	10.66			
Female/fair health status	13	17.33			
Female/good health status	18	24			

Cont'd...

Cont'd...

Homozygous albino/poor health status	10	13.33			
Homozygous albino/fair health status	3	4			
Homozygous albino/good health status	2	2.67	2	27.78	<0.001
Heterozygous albino/poor health status	5	6.67			
Heterozygous albino/fair health status	10	13.33			
Heterozygous albino/good health status	45	60			

The result in the table also indicated that 13.3 per cent of the homozygous elderly albinos had poor health while 6.7 per cent of the heterozygous elderly albinos had poor health status. Also 2.7 per cent of the homozygous elderly albinos had good health status while the majority 60 per cent of the heterozygous elderly albinos had good health status. [X^2 (2) = 27.78, P < 0.001].

To test whether age would determine the health status of the elderly albinos; *it* was also reported that majority 65.3 per cent of those with good health status were less than 75 years of age while 5.3 per cent of those that are 35 years and above had good health status. [X^2 (2) =34.96, P<O.OOI].

Table 7
Summary of Chi-Square Showing the Influence of Age on Health of Elderly Albinos

Categories	*f*	*%*	*df*	*X2*	*p*
Less than 75 yrs/poor health status	3	4			
Less than 75 yrs/fair health status	4	5.33			
Less than 75 yrs/good health status	49	65.33	2	34.96	<0.001
75yrs and above/poor health status	13	17.33			
75yrs and above/fair health status	2	2.67			
75yrs and above/good health status	4	5.33			

Discussion

Elderly albinos are prone to accidents and skin problems. Injuries from cuts might be from home accident as a result of visual problems, premature skin ageing and skin cancer might be from excessive sunlight being experienced in the tropical region. This was supported

by the Newsletter (2009) that persons with albinism are vulnerable to a number of health ailments, mainly poor eyesight and skin cancer.

Albinos are normally sensitive to insects; fleas and bugs bite than darker either people. Elderly albinos revealed that they had one time or the other either suffered divorce, or inability to get spouse on time like other darker people just because they are albinos. This was supported by the Newsletter (2009) that people with albinism experienced things like difficulties in completing school, toiling in the sun and finding someone to love and marry.

Some of the respondents claimed that they were neglected and disowned by their father when they were young just because they were albinos and their complexion did not resemble either that of their father or fathers' relations, as a result of these, they were nicknamed, harassed, neglected, isolated, and discriminated with limited opportunities. Some claimed they were called bastards due to the nature of their colour.

Low/no salt diet was believed by the Yorubas to have good effects on the skin by preventing skin cancer, sunburn and premature skin ageing. It also had good effects on the blood pressure of the elderly albinos.

Two of the elderly albinos claimed that they grew up in orphanage homes because they were dumped in the street by their parents when they were young due to albinism, and that nobody adopted them, they claimed that, the same reason (albinism) that brought them to the orphanage home also prevented them from being adopted or being married like their dark complexioned counterpart. This was supported by Reese, (2006) that albino bias may also have been influenced by attitudes towards people with albinism in Africa where those with that condition are sometimes regarded as cursed or magical.

Elderly albinos are faced with many other social problems because people believe that albinos speak with the dead and supreme beings and as a result of this, they have turned to be objects of fear, superstitions and ridicule. In addition, some of the respondents claimed they have been disappointed by their loved ones before and after marriage as a result of rape and superstitions believe that people

with albinism have short life spans as a result of skin cancer. It is believed that those albinos who were not bathed with salt water when they were born have warty skin and premature skin ageing. Contrary to this, a few of them claim they are stronger than their mates that have black skin. This agrees with Farabee (1911) findings in the region of Mississippi, that the albinos Negroes are taller and broader than the black skinned individual. It may be assumed that increased stature and breadth imply some sort of inherent physical superiority, and if such an assumption is valid, that shows there is evidence that albinism is correlative not with constitutional defectiveness but with greater perfect-ness.

Respondents with hearing impairment claimed it was due to albinism rather than old age. Some respondents claimed that, elderly people with albinism were degraded and regarded as "cursed" because culturally, Yorubas believed that albinism is caused by women that have sexual intercourse during menstruation. Some of the respondents revealed that they have changed their job as a result of loss of confidence bestowed on them by the people just because they are albinos. It was deduced that professions like barbing, photography, hairdressing, personal assistance and driving had discriminated elderly people with albinism.

Among the labels and names that people normally called elderly albinos are: Afin (white person), ofun (white person), Olorifunfun (white head), Eniorisa (god's person), Olojuirinlrin (a person with a rolling eye), AyederuOyinbo (Fake white person), Ota iyo (salt enemy), yero (white person) and so on, in addition to these, they reported that the consequences of their albinism together with labels and names being called by the people had led to some distress profile which includes withdrawal, remarrying, inability to get spouse on time, anxiety, sadness, isolation, rejection, homelessness, loneliness, divorce, fear of being labeled and fear of being rejected by parents and loved ones.

Elderly people with albinism, engage in some things to keep them on, these include: protection of their skin against sun burn and premature skin ageing in later life; and that this will as well prevent skin cancer. The use of sunglasses, brimmed hats and special sun protective clothing and swimsuits to cover their bodies completely,

these prevented them from being embarrassed, labeled and stigmatized by the people since their bodies and hair would not be seen easily.

In addition; albinos are now becoming aware that they should not marry themselves to guard against their offspring from having visual or other health related problems. Furthermore, some of the elderly albinos are now becoming more active in politics, comedy and other acts by portraying albinos in a positive manner for the correction of albino bias. Also elderly albinos do not move around alone for them not to be kidnapped for rituals or being raped. The psycho-social support of the elderly albinos are related to age hence as the albinos get older their psychosocial support gets reduced and it worsens. This was supported by Machangu (2010) that witchcraft practices and killings of elderly albinos are among the major problems facing sub-Saharan Africa. For many years they have had major effects on peoples' health, their right to life, their security, their feelings and the social well-being of their dependants.

Furthermore, it was deduced that there was no significant difference in the health status of both female and male albinos. It was further revealed that the health status of elderly albinos is related to their kinds, that is heterozygous albinos had better health status than homozygous albinos (albinos offspring from two albino parents) that had a lot of health problems and complications at old age, which worsened their health status. The health status of the elderlyalbinos are related to age, hence as the albinos get older, their health deteriorates and they suffer from different kinds of health problems and complications.

Implications for Psycho-Social and Nursing Practices

The nurses should use inter-sectoral approach by involving social welfare services for the recruitment and training of polyvalent medical-social workers for the care of elderly albinos because the health and psycho-social problems of elderly albinos not only requires nursing solution but also requires medico-social and psycho-social solutions.

There is need for continuous awareness creation among the general populations *cine – qua – nom* for the prevention and correction

of peoples orientation concerning the types of names, labels and stigmatization bestowed on the aged people with albinism.

The nurses should take premarital counseling and test concerning albinism seriously because this will help in the prevention of marriage between two people with albinistic genes and this will guide against giving birth to albinos offspring who will later become elderly albino. Nurses should educate elderly albinos to seek health care on a regulatory basis for prevention and care of the skin cancer and other health problems they suffer from. Nurses need to familiarize themselves with all the types of albinism, health and social problems and the locations where they live and meet for the purpose of educational and service provision in particular, this would improve provision of health services and drugs to the aged albinos.

Conclusion

This study revealed that the health and psychosocial complaints of elderly albinos were impaired vision, photophobia, astigmatism, nystagmus, skin cancer, premature skin ageing, immunodeficiency, isolation, rejection, labeling, stigmatization, divorce, frustration and limited opportunities. Care of nurses, sun screening, and sun protective clothing, swimsuits, health education and conventional education were associated with increased health status and the ability of the elderly albinos to cope with social stigmatization and labeling. Good education to both the elderly albinos and people in the community against job discrimination will also provide albinos with adequate social capital that will enhance their level of social support and increase their health status. Future studies should look into the influence of ethnic/cultural variables on health and psycho-social complaints of premarital counseling, and genetic testing for albinism.

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