

Research Article

Functional Status, Social Support and Quality of Life as Determinants of Successful Aging

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Abstract

Introduction: Older people 65+ constitute 4.8% of total population being characterized by frailty, socio-economic dependence, widowhood, abuse, poverty, loneliness, depression and chronic ailments. This study aims to explore the relation among functional status, and social support and QOL of community dwelling older people to understand factors contributing to successful aging.

Methods: In this cross-sectional study, random sample of 1016 senior citizens of all socio-economic status were collected from Delhi (India). The quantitative assessment was done on indicators of functional status, physical activity and quality of life by using scales of ADL, IADL, QOL, LTA and social support.

Results: Older people (80+) were significantly different on ADL, IADL, QOL GDS at $p < 0.05$. Living arrangement, education and SES affect IADL and QOL, and LTA ($p < 0.05$). Regression analysis showed significant relation of IADL with age, education, depression, economic independence, social activities, social support and depression.

Conclusion: Modifiable variables such as age, education, living arrangement, marital status and socio-economic status negatively influence the functional status. Independence in IADL, LTA and social support can improve the quality of life of senior citizens.

Impact: Deterioration in health with age and dependence arise the need for long term care services in community. Maintenance of good health can help in dealing with abuse and improve QOL. In the absence of family support or caregiver burnout, a community based long term care system can be a solution to support community dwelling older people.

Keywords: Quality of life; Healthy aging; Active aging; Social support; Depression

Introduction

The loss of function and development of disability in old age are dynamic bio-social phenomenon that relate to the individual's physiological and psychological conditions in the milieu of their socioeconomic position, cultural norms and broader environmental contexts. Aging raises a host of fascinating issues that have come into focus due to the increasing share of older people in Indian society [1]. Functional status is the ability of an individual to perform activities to meet daily challenges and keep one-self healthy both physically and psychologically [2]. It seems to be a matter of least concern for all those who are invariably leading an independent life. However, people who are aged, disabled or suffering from chronic ailments face challenges to perform activities of daily living such as getting up from the bed, taking shower, preparing a meal, watering plant, recollecting memories or taking medicines [3,4]. There is a need to understand the meaning of functionality from the perspective of the most heterogeneous group i.e. older adults. It is not only a matter of physical restrictions it also includes the emotional and psychological pressure an individual bears to cope up with his inability to perform the activities of daily living [5]. Therefore, functional status refers to the capacity of an individual to remain psychologically and physically

healthy, to work independently, to deal with different life stressors and cope with day to day problems [6,7].

Old age is an age of which people are most fearful because of the degeneration process within the body, slow speed of recovery and psycho-social losses [8]. The process of degeneration, wear and tear within the body in the absence of a healthy lifestyle makes the body vulnerable to various types of diseases and frailties. It often results in limited or complete dependence in later years of life [9]. Psychological and social losses associated with age makes the situation worse. Therefore, there are several aspects which altogether decide the functional status such as independence in Activities of Daily Living (ADL), and Instrumental Activities of Daily Living (IADL), chronic ailments, BMI, hearing and vision, perceived health, cognitive status, mental health, social support, life satisfaction, Leisure Time Activity (LTA), self-rated mental health, Quality of Life (QOL) and happiness. Functional status makes a person psychologically, physically, emotionally and spiritually sound to make better decisions, to deal with the environmental situations, to participate constructively to the society and capacitates the achieving of satisfaction and everlasting state of happiness. A large number of older adults specifically in under-developed countries where the government is unable to provide social

security, medical insurances, safety, security to hugenumber of senior citizens, suffer/ undergo a life that is more or less contingent at the mercy of their children and relatives.

In the context of Indian older adults, a survey of historical context is important to construe their physical, psychological, financial and social condition. After partition large number of people entered as refugees and settled in various parts of Delhi and NCR in 1947. They had nothing much in their hands apart from trauma and nightmares. They established themselves in varying but surely tough ways and developed means to earn their bread and butter. At present, many of them are earning through small shops and financially not much strong. In the absence of medical insurances, the diseases become huge burden on children and ultimately reason for elder abuse. Several studies show that disability, dependence make older adults vulnerable to abuses [10,11]. Therefore, the functional status which could be the key for their happiness and quality of life is the concern of present research. Can older adults attain the quality of life through active life style? Can activities of daily living, instrumental activities of daily living, leisure-time activities which are indicators of functional status related to quality of life? Is there any relationship between functional status and quality of life or they are independent of each other? What is the role of social support in establishing quality of life of older adults? What restricts the functional status of older adults in society and how it can be improved are few areas explored in this research.

Hypothesis

- Older people who are active and capable of living independently have a better quality of life as compared to those who need assistance to perform daily chores.
- Older people with limited or complete dependence need social support to improve their quality of life.

Objectives

- To assess the functional status of older people on the following parameters of functionality ADL, IADL, QOL, LTA and Social Support (SS).
- To explore the relationship between physical independence, mental health and social support on quality of life.
- To give practical and workable solutions to bring QOL in the lives of older adults.

Methodology

Variables

Independent Variables: Age, gender, living arrangement, marital status, education, Activities of Daily Living (ADL), Instrumental Activities of Daily Living (IADL), Leisure Time Activities (LTA), social support.

Dependent Variable: Quality of Life (QOL).

Sample

A sample of 1016 older people with age of 60 years and above and residing in the National Capital Region (NCR) of Delhi was taken. The random stratified sampling method was used to select sample

from Delhi. To take the sample from all socio-economic areas, three different localities namely, Ambedkar nagar, a slum area; Rohini, inhabited mostly by middle-class families; and South Delhi, where per capita income is relatively high were chosen. The sample was taken from the areas.

Distribution of the population

Distribution of population based on age, gender, marital status, living arrangement, and education. The age was categorized into five groups-Young-Old (60-65 years), Old (65-70 years) and Old-Old (71-75 years), Older-Old (76-80) and Oldest-Old (81+). The population was divided based on gender namely male and female. The whole population was categorized into three groups illiterate, primary/secondary and graduate and above based on education. The marital status was categorized as married-with-spouse-living, married-but-widowed and alone/never-married.

Procedure of Data collection

The prospective sample was defined from the voters' list and subjects were identified by random sampling with reasonable scope in case of absence and death of the identified subject. A voter list was taken from the constituency office of the respective areas and every 10th house was approached for data collection. An informed consent was taken from the elderly person before the collection of data about the objectives of the study, its methodology, advantages and disadvantages besides giving them the option to refuse to participate. Two separate teams were made- one comprising of doctors and the other of psychologists and they took the data on the prescribed formats independently. Both the teams collected data on different times and shared the list of participants with the other team. Other team followed the details and approached the participants for the remaining part of the data. Initially the data of collected from the sample of 1180 but it had reduced to 1016 because some people had either died, or shifted to some other place or showed their disinterest in providing information. The questionnaires were short and not time-consuming and all administered at one time in a single sitting. To avoid making the assessment process tiring and monotonous, the questionnaires were administered in an informal setting. To prevent the person from becoming overwhelmed by the numbers of questions in the assessment procedure, an effort was made to elicit the needed information during the conversation itself.

Tools

Barthel's index of activities of daily living: This tool is to assess activities of daily living; it uses ten variables describing ADL and mobility. The scale was introduced in 1965, and yielded a score of 0-100 by Mahoney FI & Barthel DW (1965). The Barthel index has demonstrated high inter-rater reliability (0.95) and test retest reliability (0.89) as well as high correlations (0.74-0.8) with other measures of physical disability.

Lawton's instrumental activities of daily living: The Lawton Instrumental Activities of Daily Living Scale (IADL) is an appropriate instrument to assess independent living skills. These skills are considered more complex than the basic activities of daily living as measured by the Katz Index of ADLs. The instrument is most useful for identifying how a person is functioning at present and for identifying improvement or deterioration over time. There are 8 domains of

Table 1: Comparison among the gender (male of female) of older people on the indicators of functionality.

S. No	Variables	Male (n=493)		Female (n=523)		Sig.
		M	SD	M	SD	
2	IADL	5.96	2.31	5.55	2.56	2.67**
3	MMSE	25.45	5.20	21.37	5.90	11.65**
4	QOL	250.74	52.46	218.89	47.39	10.16**

Data is presented as mean and \pm standard deviation. The variables marked * indicate those that are statistically significant within the gender groups at 0.01 level of significance by using independent sample t- test.

Table 2: Comparison among the marital status of older people on the indicators of functionality.

S. No	Variables	Married with spouse living (n=664)		Married but widowed (n=376)		Married but separated (n=3)		Never Married (n=3)		Sig.
		M	SD	M	SD	M	SD	M	SD	
1	ADL	6.04	2.24	5.25*	2.710	6.67	1.52	6.00	3.46	.00*
3	MMSE	24.88	5.12	20.73*	6.310	23.33	4.16	29.33	.57	.00*
4	QOL	247.76	50.06	212.11*	48.612	181.67	22.18	238.00	33.45	.00*

Data is presented as mean and \pm standard deviation. The variables marked * indicate those that are statistically significant within the age groups as compared to the baseline category of 'married with spouse living' using one way ANOVA, using Bonferroni Post Hoc test with $p < 0.5$.

Table 3: Comparison among the living arrangement of older people on the indicators of functionality.

S. No	Variables	Living with spouse (n=92)		Living with spouse & children(n=555)		alone(n=359)		Sig.
		M	SD	M	SD	M	SD	
1	ADL	19.61	1.72	19.53	1.81	19.24*	2.23	0.05
2	IADL	6.02	2.30	6.07	2.22	5.19	2.72	0.00
3	MMSE	26.35	4.46	24.46*	5.25	20.93*	6.39	0.00
4	QOL	244.16	51.28	247.89	49.36	211.53*	49.25	0.00

Data is presented as mean and \pm standard deviation. The variables marked * indicate those that are statistically significant within the age groups as compared to the baseline category of 'living with spouse' using one way ANOVA, using Bonferroni Post Hoc test with $p < 0.5$.

Table 4: Comparison among the educational status of older people on the indicators of functionality.

S. No	Variables	Number of years of schooling										Sig.
		No schooling (n=535)		5 years of schooling (n=115)		8 years of schooling (n=252)		12 years of schooling (n=11)		15 & more years of schooling (n=103)		
		M	SD	M	SD	M	SD	M	SD	M	SD	
2	IADL	5.19*	2.64	6.15	2.23	6.28	2.12	6.64	1.85	6.80	1.63	.00
3	MMSE	19.65*	5.15	25.85	3.75	27.44	3.84	29.36	.50	29.12	1.31	.00
4	QOL	216.64*	50.79	238.83	46.87	253.90	46.58	255.45	49.56	271.23	41.48	.00
13	SSM	32.05*	7.58	34.03	6.80	34.51	6.49	37.45	3.14	34.82	5.45	.00
20	LTA	7.32*	3.98	8.92	4.32	10.28	4.79	12.77	6.29	11.03	4.56	.00

Data is presented as mean and \pm standard deviation. The variables marked * indicate those that are statistically significant within the age groups as compared to the baseline category of 'no schooling' using one way ANOVA, using Bonferroni Post Hoc test with $p < 0.5$.

function measured with the Lawton IADL scale. Historically, women were scored on all 8 areas of function; men were not scored in the domains of food preparation, housekeeping, laundering. Inter-rater reliability was established at 0.85.

Leisure Activities Record: It was developed by Van Willigen and Chadha (1990) to assess the activities the elderly undertaken to occupy their time. The record has a list of 23 activities that the elderly could usually do during their leisure time. These activities were divided into four categories: cultural, social, solitary and physical.

Social Support Network Schedule: This tool was developed by Van Willigen and Chadha in 1991 to understand the social linking of elderly people with their neighbours, friends, and family. A list of 20 items included with two categories of response option as 'Yes' or 'No'. The response of 'Yes' means elderly is socially active and

'No' indicates a socially inactive person. A score of 2 is given to the response of 'Yes' and 1 is given to the response of 'No'.

WHOQOL-BREF: The WHOQOL-BREF was derived from data collected using the WHOQOL-100. It produces scores for four domains related to the quality of life: physical health, psychological, social relationships and environment. It also includes one facet on the overall quality of life and general health. There are 26 questions range from 'Never'=5, 'Seldom'=4, 'Quiet often'=3, 'Very often'=2, 'Always'=1 [12].

MMSE Test: The Mini-Mental State Examination (MMSE) or Folstein test is a 30-point questionnaire that is used extensively in clinical and research settings to measure cognitive impairment. It is commonly used in medicine and allied health to screen for dementia. Any score of 24 or more (out of 30) indicates a normal cognition.

Table 5: Comparisons among various socio-economic classes on functional status.

S. No	Variables	Lower SEC (n=573)		Lower Middle SEC (n=551)		Upper Middle SEC (n=208)		Upper SEC (n=84)		Sig.
		M	SD	M	SD	M	SD	SD	M	
1	ADL	19.42	1.90	19.22	2.38	19.42	2.14	19.94*	.39	0.06**
2	IADL	5.51	2.54	5.64	2.52	6.15*	2.22	6.54*	1.93	0.00**
3	MMSE	21.02	5.70	24.56*	5.76	27.01*	4.01	28.02*	3.17	0.00**
4	QOL	220.57	51.88	241.58*	49.05	252.02*	46.94	271.56*	39.45	0.00**
13	Social Support Measurement	31.93	7.65	34.97*	6.44	34.92*	5.76	35.04*	5.42	0.00**
20	Leisure Time Activities	7.24	3.97	10.02*	4.40	10.77*	4.81	11.17*	4.57	0.00**

Data is presented as mean and ± standard deviation. The variables marked * indicate those that are statistically significant within the age groups as compared to the baseline category of 'lower section' using one way ANOVA, using Bonferroni Post Hoc test with p < 0.5.

Table 6: The detailed regression coefficients and significance levels.

	ADL		IADL		MMSE	
	Regression coefficient (r)	Significance levels (p)	Regression coefficient (r)	Significance levels (p)	Regression coefficient (r)	Significance levels (p)
Non modifiable factors						
Age	-0.25	0.00*	-0.50	0.00*	-1.01	0.00*
Gender	0.012	0.924	0.41	0.008*	4.08	0.00*
Modifiable factors						
Environmental and social						
Marital status	-0.23	0.05*	-0.67	0.00*	-3.52	0.00*
Living arrangements	-9.6	0.02*	-0.31	0.001*	-3.02	0.00*
Education	0.119	0.012*	0.44	0.001*	2.80	0.00*
Socioeconomic scale	-	-	0.215	0.001*	1.87	0.00*
Working now	0.96	0.00*	0.50	0.007*	1.65	0.00*
Psychological variables						
Social support	0.019	0.035*	0.027	0.017*	0.125	0.00*
Leisure time activities	0.024	0.094	0.064	0.000*	0.266	0.00*

Below this, scores can indicate severe (≤9 points), moderate (10-18 points) or mild (19-23 points) cognitive impairment.

Other Information Includes

Demographic Details: such as the person’s name, age, gender, and contact address.

Socio-Economic Status: Person’s educational level, marital status, current living arrangement, occupation (if any), monthly income, and sources of income.

Family History: Numbers of children and the availability of caretakers.

Results & Analysis

Quality of Life (QOL) is the general well-being of individuals and societies, outlining negative and positive features of life; it depicts happiness and overall satisfaction. It is very difficult to measure the quality of life because of its subjective nature. The functional status seriously affects QOL. In the present research functionality had been assessed by ADL, IADL, MMSE, LTA and the influence of age, gender, marital status, education, living arrangement, and socio-economic status also studied on these variables of functionality.

Of the 1016 subjects included in the study, 523 (51.5%) were

females and 493 (48.5%) were males. The mean age of our study subjects is 67.86 years (+7.52). The population studied has a higher number of females and most individuals studied are young-old (60-64 years). Females are significantly low in IADL, QOL (p>0.01).

Older people who are married and living with their spouse are 62.4% and 37% are widowed. 36.3% are living alone and the largest numbers of people who are living alone (59.2%) belong to the age group of 80+ followed by senior citizens living alone. It reflects that most of the widowed population (94.7%) is living alone.

52.7% population of older people is illiterate and 87.8% is not working only 12.2% is currently working. 17.9% chose to leave work because of ill health 23.4% of older people are out of the formal work sector. It seems to be a lack of good health and stereotypes are the major reason behind the non-working status. It has a significant impact on the social and financial status of older citizens in society Table 1.

The Table 2 shows the comparison of the marital status among the older people on various indicators of functionality. The widowed group of older citizens is significantly poorer in instrumental activities of daily living, cognitive status, and quality of life.

The results depicted in the Table 3 shows the comparison among

the categories of living with a spouse, living with spouse and children and a living alone group of older people. Older people who are living alone found to be poor in performing the instrumental activities of daily living. The cognitive status as depicted by the MMSE score shows that those who are living with spouse shows the best cognitive status and those who live alone show the worst. The quality of life is worst among older adults living alone. The mean scores show that those older people who are living with spouses and children are better when compared with other groups. The older people who are living alone found to be in the worst condition on all the four domains of quality of life. There is no difference when the three groups are compared on the indicator of social support. The living with the spouse group is better on leisure time activities and the living alone group is worst.

The results depicted in the above Table 4 shows that education is significantly influencing the functional status of the older person. It is found that the illiterate group of older people is poor in IADL, Cognitive status, QOL, social support and in leisure time activities [13]. However, the graduate and above group shows the highest scores on all the indicators of functionality.

Table 5 shows the comparison of the socioeconomic statuses among the older people on various indicators of functionality. It is found that the upper section of the socioeconomic status is significantly better in ADL, IADL, MMSE, QOL, Social Support, and LTA as compare to the other groups of socioeconomic status.

Correlates of functional status

A negative correlation was detected between ADL and age (r , -0.17), using Pearson's correlation coefficients. This indicates that a better BMI and a higher MMSE score are associated with a higher functionality on ADL score also resulting in a better quality of life. Also, as age advances, there is a decline in functionality. A similar significant correlation was found between IADL and MMSE (r , 0.34) and QOL (r , 0.37). Also, a significant negative correlation was found with increasing age (r , -0.25). The correlation analysis indicates that as age advances there is a fall in functionality. A higher BMI in non-obese individuals and a higher MMSE score are associated with better functionality.

Kendall's coefficient of correlation was calculated between ADL, IADL and ranked indicators. A significant correlation of ADL was found with Kuppaswami socioeconomic scale (r , 0.06), geriatric depression grade (r , -0.01) and home environment screening score (r , -0.19). Similarly, a significant correlation was found between IADL and socioeconomic scale (r , 0.11) and depression (r , -0.007). These results indicate that depression causes a fall in physical functionality as does an unsafe home environment. Better socioeconomic status is associated with a better functionality.

Physical exercises are positively correlated with the ADL i.e., those who are involved in the regular physical exercise are better in performing the activities of daily living. The variable working now with ADL shows a significant correlation (r , 0.08) and with IADL (r , 0.13) shows that those older people who are working are more functional.

Analysis of the social support scale shows a significant correlation with ADL, IADL, (r , 0.07, 0.08) respectively. The leisure time activities are correlated well with IADL. Those who are medically functional,

functionally independent as well as involve in instrumental activities of daily living make use of their leisure time better than others. Involvement in leisure time activities shows a significant correlation with ADL (r , 0.06) and IADL (r , 0.12) Table 6.

With regard to access to the health care system and social support framework, 30% individuals have access to free health care in the system whereas 70% do not have any kind of insurance or access to free health care supports. Most subjects are dependent on their children, relatives or spouses for support in case of emergency. The dependence on daughters is significantly lower than the dependence on sons due to a largely patriarchal family system in society in the region of study.

Discussion

Life is a composite of multiple factors that influence various persons differently at various points of life. What is going to have what effect on particular person is difficult to hypothesize because everyone has unique personality characteristics, life experiences, perceptions, attitudes, values, fears, needs and capabilities. Further, each individual is a construct of unique economic and socio-cultural circumstances. Therefore, variables influencing the functional status and quality of life may roughly be classified in two major categories: Non-modifiable and Modifiable. Non-modifiable variables are those that are biological in nature and beyond the control of mankind such as age, gender and genetics. Modifiable variables are those which are socio-economic in nature and can be manipulated such as living arrangement, marital status. Education, working status etc. It also includes psychological variables are related to the mental state of an individual such as perception, attitude, optimism, hardiness, satisfaction, happiness etc. that influence the quality of life of an individual.

Non-modifiable variables

Age: Aging is a biological process of the degeneration of body, all the five categories as per age-Young-Old (60-65 years), Old (65-70 years) and Old-Old (71-75 years), Older-Old (76-80) and Oldest-Old (81+) were compared on ADL, IADL, LTA, SS, QOL. Age significantly affect ADL, IADL and LTA and ultimately negatively influence the QOL. In related researches done by Bleijenberg N, Ćwirlej-Sozańska A and Kim BJ [14-16] age found to be negatively correlated with mobility and positively with depression. Disability in activities as household tasks, travelling, shopping, and continence had the highest risk and increased rapidly with age. Disability in using the telephone, managing medications, finances, transferring, and toileting, had a very low risk and hardly increased with age.

Gender: Several research studies conducted in various parts of the world shows that males are better in terms of physical health and mobility as compare to females [17]. Women have higher risk of ADL and IADL limitations than men and that sex differences increase with advancing age [18,19].

Modifiable variables

Socio-economic status: Socioeconomic status assessed through Kuppaswami scale of socioeconomic shows that availability of resources positively influences the ADL, IADL, LTA, QOL and social support. People who are well-off can pay for the treatment, can afford healthy diet, and have good networking with people therefore live

better quality of life as compared to those who have limited resources to feed themselves. In a Chinese Longitudinal Healthy Longevity Survey (2002-2011) It is found that high income was related to better IADL functioning, inadequate financial resources and unavailability of health services were mainly associated with poorer ADL and IADL functioning [20,21].

Education: Education develops the capability of decision-making. It provides an attitude as well as right kind of perception therefore it is directly related to the physical health as well as mental health of an individual. This research supports this statement with the fact that as the level of education increases the ADL, IADL, LTA social support and QOL all get significantly affected. In a research done by Lee S, [22] in both genders, age and IADL scores were negatively associated with MMSE scores, while educational level was positively correlated. In another study all subgroups experienced an increase in ADL and physical function limitations except for adults with a more than high school education [23]. It is also evident that elderly women with disability and higher education levels have similar prevalence of depressive symptoms compared to those without disability (17.9% and 16.1%, respectively), but lower compared to those disabled with lower education (37.2%) [24,21].

Living arrangement: In old age people either live alone, with spouse or with spouse and children. But with whom do they live define the functional status as well as quality of life. Old age is associated with lots of health problems, living alone in the absence of proper social support system is difficult. Present research shows that older person living alone has significantly poor functional status and quality of life. However, living with family i.e. with children grandchildren seems to keep older adults active and happy. The changing family system where both husband and wife are working elderly parents are not able to enjoy the care they used to do, also migration left no option to older parents else then living alone. Those older adults are suffering from disabilities or chronic ailments are in a pity state as compare to those who have are living with spouse or with children. Family has huge sentimental value for everyone and people found to be happy and satisfied when with their family rather than in old age home irrespective of the socioeconomic status and interpersonal conflicts with other family members [25]. Because with family older adults feel their life purposive and active [26]. Daniela S Jopp et al., [27] also found that for life satisfaction, subjective health, ADL and number of children were most important. Demographic characteristics, number of illnesses or cognitive status were not significant. The residents of free old age home were less educated, had lower income and reported higher incidence of worry, anxiety, disability and poor QOL than community-dwelling or paid-home residents [28]. A study done by Amonkar P et al., [29] Quality of life of elderly within family setup was better as compared to elderly in OAHs.

Psychological variables

Social Support: Family is considered as the biggest support system in the life of every individual but when the family ties become weak and the elderly parents are left unsupported then society should help them in developing a social support system. Government is establishing old age homes despite the social stigma associated with OAH in the Indian context. However, the QOL of elderly in domains of autonomy, past present & future activities, social participation and

intimacy was better in family setup as compared to OAHs. Social support and quality of life also depend upon the relationship with care giver [30] along with the severity of disability or limitation of ADL and IADL [31].

In this era of social networking older adults are strengthening their ties despite limited mobility. Researches also show that greater support network size predicted lower perceived stress, fewer depressive symptoms, and better life-satisfaction, yet this association was fully mediated by relationship satisfaction [32].

Leisure Time activity: The existing literature suggests that passionate engagement in leisure activities leads to happiness, life satisfaction, quality of life and consequently successful aging among older adults. This qualitative study done by Junhyoung Kim et al., [33,34] among older Korean adults, who were members of a sports club shows the following benefits of serious engagement in leisure activities: 1) the experience of psychological benefits, 2) the creation of social support, and 3) the enhancement of physical health. These themes indicate that, through serious involvement in certain physical activities, participants gain various health benefits, which may contribute to successful aging. There several other researches support present results of the study that LTA is significantly correlated with IADL and cognitive status of older adults. Cultural, social, solitary and physical all activities altogether constitute leisure time activities but because of variety of interest people often restrict themselves to few activities. Expectation of society in terms of one's role as an aged person also prepares a mind set for some involvement in some activities over others. For examples, In Indian society women after puberty spend more time in household activities rather than playing outdoor games and this tendency would become a life style. Education and socio-economic status have huge impact on LTA. People with high education level have a vision for life and accordingly involve themselves in various activities of interest to keep them sedentary life style [35]. The involvement in leisure time activities promotes psychological well-being and helps in dealing with geriatric depression [36,37].

Quality of Life: QOL found to be significantly better in people of high socio-economic strata and high education level. Quality of life has been manifested in the form of functional status i.e. ADL, IADL, cognitive status of older adults. Better functional status may result into good quality of life i.e., high satisfaction and happiness [38]. Several studies show that high and moderate levels of physical activity have a great positive relationship with the HRQoL in community-dwelling middle-aged and older adults [39]. Also the practices promoting quality of life comprise of healthy eating habits, daily physical exercise, social participation, interaction and socialization, accomplishment of leisure activities and performance of daily tasks with independence and autonomy. These, along with support from family, enhance the quality of life [40].

Recommendations

The lives of older people who are physically, psychologically, economically and emotionally dependent on others for survival face the biggest threat and challenge in late life [3,6,9]. Living with family members despite all abuses becomes a necessity for them in the absence of any support system outside the four walls of the

house [41,42]. Older people who choose to live separately from their children with their spouse only for a life with dignity must undergo lots of challenges on a day-to-day basis [43,44]. The most important question is who within the community would spend the time and energy to take care of the dependent older adults when their own family finds it difficult to support them?. In India there is no formal care giving system in the community, in the absence of it people with limited dependence or complete dependence for ADL or IADL are bound to live on the mercy of caregivers or paid house helps which they hire for assistance [45,6]. In the absence of sensitivity towards needs and concerns of older adults, proper training and orientation to the geriatric care paid personal often leave jobs frequently or abuse them. On the other hand, children who want to take care of their older parents but may not be able to devote as much time as required because they have to earn the livelihood for the family also, ultimately have to leave older adults unnoticed in the family.

Old age homes may face resistance for four reasons. Firstly, the concept of old age home is not in alignment with the philosophy of Indian culture with a sense of stigma associated with it [37]. Children don't want to send their parents to old age homes despite all odds and the same is true for parents. Despite all the ill-treatment older adults neither want to share the incidences of mistreatment with others nor want to separate from their offsprings. A second big reason is that it is practically not possible to accommodate 100 million older adults in old age homes. It requires huge infrastructure and cost. The third and the biggest reason is that the establishment of OAH is not an inclusive approach. Restricting the life of older people in a perimeter in the name of care is inhuman. It is another form of discarding them from the society and curtailing the natural phenomenon of interaction with the surroundings and loved ones [46]. Fourth reason is isolating older adults in old age homes or care homes limit the interaction of older people with their grandchildren and hamper the transfer of cultural values from one generation to another. The cultural binding stories which they should learn from their grandparents would be learnt from secondary sources and can only be imagined however same learning can take place by observing their grandparents in day to day life. Therefore, old age though is the need of today but at the same time is not a healthy solution to deal with problems of functionality with older adults [36].

Many countries have taken up home assisted care as a practical solution for elder care and reduction of caregiver stress which is one of the leading causes of elder abuse [45]. Several studies support that older people want to be in their homes and with their family members [45] but if the present system fails in providing support and care to older family members then a system outside home needs to be developed to cater to all needs of senior citizens [47]. For example, an older couple living alone finds it difficult to cook then they should get home-cooked food as per their needs at their doorstep. A laundryman can come to help them in washing clothes. Someone could assist them with buying medicines, grocery and payments of monthly bills, etc. All those people should be reliable because the major problem with house helps faced by older people living alone is that they are not reliable and often take advantage of their trust and frail physical and mental health. There are increasing incidences of robbery and murder of older people staying alone (Times of India, 2018). Delhi has been categorized as the most unsafe city for senior citizens in 2015, the

latest data from the "Crime in India" report released by the National Crime Records Bureau (NCRB) said, with a rate of 108.8 crimes per 100,000 elderly population, senior citizens in the national capital are almost five times more likely to become victims of crime than the rest of the country [48].

The findings of present research reveal many older people are widowed, less-educated, physically and emotionally dependent on others. The research is a big indicator for provision of well-structured homes assisted community-based long-term care system [49-51,42]. It would help them in coping with social, psychological and physical challenges and help develop a positive self-construct [52].

References

- Kang Y, Kim M, Lee E. The relationship of perceived health status, activities of daily living and nutrition status in the community-dwelling Korean elderly. *TaehanKanhoHakhoe Chi*. 2008; 38: 122-130.
- Elliott JO, Lu B, Moore JL, McAuley JW, Long L. Exercise, diet, health behaviors, and risk factors among persons with epilepsy based on the California Health Interview Survey. 2005. *Epilepsy Behav* 2008.
- Zimmerman L, Barnason S, Schulz P. The effects of a symptom management intervention on symptom evaluation, physical functioning, and physical activity for women after coronary artery bypass surgery. *J Cardiovasc Nurs*. 2007; 22: 493-500.
- Barrantes-Monge M, Garcia-Mayo EJ, Gutierrez-Robledo LM, Miguel-Jaimes A. Functional dependence and chronic disease in older Mexicans. *Salud Publica Mex*. 2007; 49: S459-466.
- Machado GP, Gignac MA, Badley EM. Participation restrictions among older adults with osteoarthritis: a mediated model of physical symptoms, activity limitations, and depression. *Arthritis Rheum*. 2008; 59: 129-135.
- Maaskant MA, Van den Akker M, Kessels AG, Haveman MJ, Van SchroyenLantman-de Valk HM, Urlings HF. Care dependence and activities of daily living in relation to ageing: results of a longitudinal study. *J Intellect Disabil Res*. 1996; 40: 535-543.
- Paterson DH. Physical activity and functional limitations in older adults. *International journal of behavioral Nutrition and Physical Activity*. 2010; 7.
- Dey AB, Soneja S, Nagarkar KM, Jhingan HP. Evaluation of the health and functional status of older Indians as a prelude to the development of a health programme. *Natl Med J India*. 2001; 14: 135-138.
- Hebert R, Brayne C, Spiegelhalter D. Factors associated with functional decline and improvement in a very elderly community-dwelling population. *Am J Epidemiol*. 1999; 150: 501-510.
- Gobbens RJJ, Marcel ALM van Assen. The Prediction of ADL and IADL Disability Using Six Physical Indicators of Frailty: A Longitudinal Study in the Netherlands. *Curr Gerontol Geriatr Res*. 358137PMCID: PMC3982262.
- HelpAge India. Annual report Help Age India. 2009.
- The WHOQOL Group. The World Health Organization Quality of Life assessment (WHOQOL): position paper from the World Health Organization. *Soc Sci Med*. 1995; 41: 1403.
- Iavarone A, Milan G, Vargas G. Role of functional performance in diagnosis of dementia in elderly people with low educational level living in Southern Italy. *Aging Clin Exp Res*. 2007; 19: 104-109.
- Bleijenberg N, Zuihoff NPA, Smith AK, de Wit NJ, Schuurmans MJ. Disability in the Individual ADL, IADL, and Mobility among Older Adults: A Prospective Cohort Study. *J Nutr Health Aging*. 2017; 21: 897-903.
- Ćwirlej-Sozańska A, Wiśniowska-Szurlej A, Wilmowska-Pietruszyńska A, Sozański B. Determinants of ADL and IADL disability in older adults in southeastern Poland. *BMC Geriatr*. 2019; 19: 297.
- Kim BJ, Liu L, Nakaoka S, Jang S, Browne C. Depression among older Japanese Americans: The impact of functional (ADL & IADL) and cognitive status. *Soc Work Health Care*. 2018; 57: 109-125.

17. Schön P, Parker MG, Kåreholt I, Thorslund M. Gender differences in associations between ADL and other health indicators in 1992 and 2002. *Aging Clin Exp Res*. 2011; 23: 91-98.
18. Scheel-Hincke LL, Möller S, Lindahl-Jacobsen R, Jeune B, Ahrenfeldt LJ. Cross-national comparison of sex differences in ADL and IADL in Europe: findings from SHARE. *Eur J Ageing*. 2019; 17: 69-79.
19. Tomioka K, Kurumatani N, Hosoi Hn. Age and gender differences in the association between social participation and instrumental activities of daily living among community-dwelling elderly. *BMC Geriatr*. 2017; 17: 99.
20. Yang L, Kontinen H, Martikainen P, Silventoinen K. Socioeconomic Status and Physical Functioning: A Longitudinal Study of Older Chinese people. *J Gerontol B Psychol Sci Soc Sci*. 2018; 73: 1315-1329.
21. Zhu X, Qiu C, Zeng Y, Li J. Leisure activities, education, and cognitive impairment in Chinese older adults: a population-based longitudinal study. *Int Psychogeriatr*. 2017; 29: 727-739.
22. Lee S, Lee S, Lee E, Youm Y, Cho HS, Kim WJ. Gender differences in social network of cognitive function among community-dwelling older adults. *Geriatr Gerontol Int*. 2020.
23. Tsai Y. Education and disability trends of older Americans. 2000-2014. *J Public Health (Oxf)*. 2017; 39: 447-454.
24. Torres JL, da Silva SLA, Lustosa LP. The role of education on the association between disability and depressive symptoms among community-dwelling older adults: Evidence from Frailty in Brazilian Older People (Fibra) study. *Arch Gerontol Geriatr*. 2019; 80: 120-124.
25. Feng Q, Zhen Z, Gu D, Wu B, Duncan PW, Purser JL. Trends in ADL and IADL disability in community-dwelling older adults in Shanghai, China, 1998-2008. *J Gerontol B Psychol Sci Soc Sci*. 2013; 68: 476-485.
26. Tomioka K, Kurumatani N, Hosoi H. Relationship of Having Hobbies and a Purpose in Life With Mortality, Activities of Daily Living, and Instrumental Activities of Daily Living Among Community-Dwelling Elderly Adults. *J Epidemiol*. 2016; 26: 361-370.
27. Daniela S Jopp, Min-Kyung S Park, Jonathan Lehrfeld, Michelle E Paggi. Physical, Cognitive, Social and Mental Health in Near-Centenarians and Centenarians Living in New York City: Findings From the Fordham Centenarian Study. *BMC Geriatr*. 2016; 16: 1.
28. Samuel R, McLachlan CS, Mahadevan U, Isaac V. Cognitive Impairment and Reduced Quality of Life Among Old-Age Groups in Southern Urban India: Home-Based Community Residents, Free and Paid Old-Age Home Residents. 2016.
29. Priyanka Amonkar, Madhavi JogeshMankar, Pandurang Thatkar, Pradeep Sawardekar, Rajesh Goel, Seema Anjenaya. A Comparative Study of Health Status and Quality of Life of Elderly People Living in Old Age Homes and within Family Setup in Raigad District, Maharashtra. *Indian J Community Med*. 2018.
30. Li LW, Seltzer MM, Greenberg JS. Social support and depressive symptoms: differential patterns in wife and daughter caregivers. *J Gerontol B Psychol Sci Soc Sci*. 1997; 52: S200-211.
31. Griffith LE, Raina P, Levasseur M, Sohel N, Payette H, Tuokko H, et al. Functional disability and social participation restriction associated with chronic conditions in middle-aged and older adults. *J Epidemiol Community Health*. 2017; 71: 381-389.
32. Heather R Fuller-Iglesias. Social Ties and Psychological Well-Being in Late Life: The Mediating Role of Relationship Satisfaction. *Aging Ment Health*. 2015; 19: 1103-1112.
33. Junhyoung Kim, Naoko Yamada, JinmooHeo, Areum Han. Health Benefits of Serious Involvement in Leisure Activities Among Older Korean Adults. *Int J Qual Stud Health Well-being*. 2014; 9: 24616.
34. Junhyoung Kim, Lori Irwin, May Kim, Seungtae Chin, Jun Kim. The Role of Leisure Engagement for Health Benefits Among Korean Older Women. *Health Care Women Int*. 2015; 36: 1357-1374.
35. Chadha NK, Chao D, Majumdar P, Sharma R. Marital status and leisure activities among the elderly. *Help Age India: Research and development journal*. 2006; 12: 8-13.
36. Sharma R. "Life Style: A Key to Happy Aging" published by Scholars' Press, Germany. 2017.
37. Sharma R. Effectiveness of life style interventions as self-help technique to enhance psychological well-being of institutionalized and non-institutionalized senior citizens. *Journal of Gerontology and Geriatric Research*. 2014; 3: 189.
38. M Choi, M Lee, M-J Lee, D Jung. Physical Activity, Quality of Life and Successful Ageing Among Community-Dwelling Older Adults. *Int Nurs Rev*. 2017; 64: 396-404.
39. Abdelbasset WK, Alsubaie SF, Tantawy SA, Elyazed TIA, Elshehaway AA. A cross-sectional study on the correlation between physical activity levels and health-related quality of life in community-dwelling middle-aged and older adults. *Medicine (Baltimore)*. 2019; 98: e14895.
40. Ferreira MCG, Tura LFR, Silva RCD, Ferreira MA. Social representations of older adults regarding quality of life. *Rev Bras Enferm*. 2017; 70: 806-813.
41. Gangrade KD. Social Networks and Crisis Management in Indian Families: A Personal Account. Shah AM, Baviskar BS, Ramaswamy EA, Editors. In: *Social structure and change*. Delhi: Sage publications. 1998.
42. Jamuna D. The psychological and social correlates of successful ageing among elderly Indian women. *Indian Journal of Gerontology*. 1994; 8: 18-23.
43. Jamuna D. Ageing in India: Some key issues. *Ageing International*. 2000; 25: 16-31.
44. Sivamurthy M, Wadakannavar AR. Care and support for elderly population in India: Results of a survey rural North Karnataka. 2001.
45. Sharma R, Kaur R. Elder Abuse, Depression, Relationship and Attachment: Determinants of mental health in later life. *International Journal on Ageing in Developing Countries*. 2016; 1: 68-81.
46. Sharma R. Intergenerational learning. *Gerontology & Geriatric Research*. Austin Publishing group. Open access. 2016; 2: 1012.
47. Sharma R, Dey AB. Healthy Aging - A social responsibility. *Central Asian Journal of Medical Sciences and Education*. 2015; 1: ISSN 2412-3684.
48. Indian Express. Delhi most unsafe city for senior citizens: NCRB report. 2018.
49. Sharma R, Marwaha EB. Rising demand for community based long term care services for senior citizens in India. *Indian Journal of Health and Wellbeing*. 2017; 8: 921-924.
50. Paintal HK. Self concept and successful ageing in medical men. *Indian Journal of Gerontology*. 1992; 6: 75-81.
51. Ramamurti PV. Coping with Ageing. *Indian Journal of Medical Research*. 1997; 106: 376-380.
52. Sharma R. Social support as a mental health indicator and its influence on IADL of the community dwelling senior citizens in Delhi. *International journal of stress management and allied sciences*. 2013; 2: 34-37.