Indian Journal of
GERONTOLOGY

(a quarterly journal devoted to research on ageing)

Vol. 37 No. 4, 2023

Indian Journal of Gerontology

(A quarterly journal devoted to research on ageing)

PEER REVIEWED JOURNAL

ISSN : 0971-4189

Approved by UGC – (CARE List Group B – Science, 121)

SUBSCRIPTION RATES

Annual Subscription

US $ 80.00 (Including Postage)

UK £ 50.00 (Including Postage)

₹ 1000.00 Libraries in India

Subscriptions are for Calendar year only

Claims for missing issues can be made within two months of publication

Financial Assistance Received from :

ICSSR, New Delhi

Printed in India at :

Aalekh Publishers

M.I. Road, Jaipur

Typeset by :

Rajeev Kumawat

Jaipur

Contents

NEWS & VIEWS

SCOPE OF THE JOURNAL

Indian Journal of Gerontology (ISSN : 0971-4189) is a peer-reviewed and UGC Approved Journal, and is indexed by - the Indian Ctation Index, Google Scholar, CNKI Scholar, EBSCO Discovery, and UGC Group 1. Started in the year 1969, is the first in India, and 18th in the world. It publishes papers related to the Biological aspects of Human ageing, animal ageing, and ageing of plants. It also publishes papers on geriatrics, geriatric nursing, and geriatric physiotherapy (Clinical aspects). The social aspects of ageing cover, Sociology, Social work, Anthropology, Psychology, Economics, Demography, and other Social Sciences.

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Indian Journal of Gerontology
2023, Vol. 37, No. 4, pp. 461-475
ISSN : 0971-4189, UGC No. – List B, Science –121

Ageing in the Age of Smartphones

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ABSTRACT

The paper aimed to find out whether 'the smartphone', one of the most popularly used gadgets in today's society, has become a substitute for the families of older adults or not. Twenty elderly persons of both sexes (Males=9, and Females=11), ages varying from 60 years to 80 years, were purposively selected on the basis of two criteria: First, those who live alone without their families (both widows and couples), and second, the respondents who have smartphones, in this study. The respondents were interviewed individually. The analysis of the data revealed that some of the elderly were using the latest devices of smartphones for various purposes such as purchasing groceries, medicines, banking, etc., and making their lives more comfortable.

Keywords: Loneliness, Social isolation, Ageing, Smartphones, Digital inclusion

Older adults who are better educated and qualified are seen to use more technology and are also found to be more active on the internet than those who are less qualified (UNECE Policy 2021). Also, it portrays the fact that women are more likely to use technologies in comparison to men for the purpose of communication through calls,

messaging and also using various social media (Ibid). Apart from communication, the larger social network has been said to improve individual's psychological and physical health also, which in turn will help them to attain a positive quality of life (Konagaya, 2009), since social relationships are effective in lowering the level of stress and depression amongst older adults (Uchino, 2006). Also, the increasing use of ICTs brings in the feeling of independence and also leads to personal growth (Czaja, *et al.*, 2006). In an ethnography, Kanayama (2003) brings out the fact that communication through technology helped in constructing and fostering real relations among elderly beings.

Several studies have pointed out the importance of conditions that would help older adults, those who live alone, specially to maintain social networks so that they could overcome feelings of loneliness (Zebhauser, *et al.*, 2015). These technologies according to Waycott, *et al.*, (2019), "ensure a person who is alone does not feel alone". Among all other social networks, the internet has been stated as the most important technological development by many researchers that has made it possible for people to participate more in social activities (Pan, 2018). Although smartphones have been perceived "as a container of social universes, including loved ones, family and friends" that have become a constant "companion" in the daily lives of older adults (Walton, 2021), several researchers portray the fact that "increased age has been related to a lower probability of internet use" (Gilleard, and Higgs 2008 in Silva. *et al.*, 2022:18). Despite the stereotypical ideas regarding elderly people as 'outdated', 'withdrawn' and 'lack interests', Rosales *et al.*, (2016) pointed out the increasing number of elderly populations using technology, especially smartphones, and computers. However, Mukherjee (2011) argued that people residing in town or city areas are seen to use more ICT-enabled technologies than those who are living in rural areas.

Jeong, *et al.*, (2016) has put forward the point that people who use the internet and social media have the wish to 'acquire' and maintain social status in society and also to experience affective bonding since the people of the older generation give priority to maintain social

relationships only over acquiring new knowledge, keeping in mind the limited time they have (Sims, *et al.,* 2017). To enjoy the facilities of smartphones, the elderly are said to prefer nowadays, 'smartphone-mediated communication' over 'direct face-to-face communications' (Kim, 2017).

The Objective of the Study

In everyday life, we see a lot of ageing adults living alone. Lamb (2000) also pointed out that in modern society many aged people are 'living alone' or in Bengali '*eka*'. She has even pointed out how the new home for the aged- 'old age homes' are increasing in every corner of India specially for the 'Hindu middle and upper middle classes'. Brijnath (2014), has argued that in the era of modernity, the decreasing role of the aged results in "increasing maltreatment, loneliness and poor state of health". Thus, the separation of old parents from their children results in an increasing breakdown of joint families. However, as discussed above technology has become an important part of human lives, including the lives of ageing adults. Keeping in mind these facts the researcher aimed to find out how smartphone users, and older adults belonging to the middle-class experience ageing.

Method

Sample

Twenty elderly persons of both sexes, ages varying from 60 years to 80 years, were purposively selected on the basis of two criteria: First, those who live alone without their families (both widows and couples), and second, the respondents who have smartphones, in this study. Out of twenty respondents, eleven were female and nine were male. Seven respondents belonged to the age group 60-65, eight of them belonged to the age group 65-70, three were in the age group 70-75 and two were there in the age group 75-80. They all were Bengali by ethnicity and are permanent residents of Bardhaman. Coming to the living arrangements, it was found that ten of them were widows/widowers and they live alone (some have caregivers though) and in the rest of the households, the aging couples reside. Most of

their children stay outside the town, some live abroad, and some stated that their daughter has moved on to their in-laws after marriage.

Methods of Data Collection

The fundamental data had been collected using a face-to-face interview method using a semi-structured questionnaire prepared to find out the objectives of the study. The questionnaire was prepared to gather data on the following: socio-demographic details (i.e., the general information schedule to gather personal details like name, age, and gender), perspective on smartphone use, and its impact on the individuals. The data was collected over a period of ten days (one day was spent in two of the respondent's houses to gather maximum information from the respondents) and most interviews took 20-30 minutes to complete (maximum it lasted for 35 minutes). Mostly there were open-ended questions to bring out their experiences, interpretation, and understanding of the situation around them and to get detailed information about participants' feelings, emotions, and perceptions.

Analysis of Data

The thematic Analysis method was used for the purpose of analyzing the data obtained from the interviews of the respondents. Before analysis, the collected data (in the form of participants' descriptions of their experiences and their points of view on the issue), and all the notes related to observations related to the basic patterns were organized properly. Mainly, the ideas and the opinions of the participants in the form of a 'common theme' which was able to answer the present study's questions were focused in the analysis.

Findings

Familiarity with the Internet and Smartphones

The majority of the respondents were found to be familiar with their smartphones however one of them stated that her daughter had recently brought her a smartphone and she is trying to learn the technology. Out of all, two had stated that although they have a smartphone, they did not use it much since according to one

respondent: "*bujhina besi, kokhon ki hoye jai, tai phone kori and phone dhori sudhu*" (I don't have much knowledge regarding smartphones, so I use it less in the fear that if something happens to it). In spite of having smartphones, fear and digital hesitancy were seen as important factors behind less utilization of smartphones. Most of the respondents were of the opinion that they were less familiar with technology until they and their children were living under the same roof. Also, respondents' busy job schedules and domestic chores were barriers to learning and adopting new technologies but now according to them, adequate time has provided them with the opportunities to learn 'something new'.

Reason for Using Smartphones

According to most of the respondents, the aim behind using smartphones is to remain independent. As one of them stated: "*jokhon jeta lage, order korte pari flipkart theke. Ghore diye jai subidha hoy*" (it has become easier to order and buy groceries and other items from Flipkart as they deliver directly to the home). She added: "*bollei meye kore dai sob kaj, kintu orao basto thake tai nije kore ni jokhon subidha ache"* (if I ask my daughter she will do it, however, they also remain busy so I do it whenever I need). Another stated that smartphones have made it possible to order medicines as well. Although older adults were seen to depend on the sites to buy things, they were seen to avoid net banking. One stated: "*ami boyoshko manush, jodi bank theke sob taka kete nai, tai ami delivery korle taka di."* (I am an old man, and I don't have much knowledge regarding all this. If I lose all my money from the bank, I prefer to pay in cash when the products arrive).

Apart from using smartphones to buy necessary things, it serves other purposes also. Smartphones were used by them to maintain contact with their friends, families, and extended personal networks. Some of the participants were part of family groups or friend groups on WhatsApp as well. On asking how it feels to be a part of these groups, one stated "*sobai k bhalo dakhteo, bhalo lage"* (seeing others happy, made me happy too). Social media was found to be the

main reason behind their smartphone usage. Also, according to them, it has become a very efficient means to keep themselves busy in their "idle lives". However, out of all respondents, one stated that she uses a smartphone because her son has bought that for her.

Use of Apps on the Smartphones

The respondents reported using WhatsApp, and Facebook more than any other apps. It was found that forwarding messages in WhatsApp and sending morning greetings to everyone regularly falls under the daily routine of the respondents as that helps them to feel connected with the people. Also, the shopping apps were seen to be used by the respondents to order things online. Apart from that, one lady added : "*amar kichu dorkar hole, WhatsApp a likhe dileo dokan theke bari te diye jai"* (if I need anything, I write the things in WhatsApp and the nearby shop delivers those things at home).

Another stated that after his wife's demise, he used to spend most of his time on television however he stated that after his television got damaged, he got addicted to his phone. Now he used to watch television programmes on his smartphone as well apart from using other apps. The respondents were found to use cameras sometimes, to send their children photos regularly. Apart from that, gaming apps like Ludo and radio were seen to be used frequently by the respondents.

Most Viewed Content on the Smartphones

Although devotional and cooking channels on YouTube were found to be quite popular content among the female respondents, the widows were seen as fonder of religious content. According to one of the respondents, listening to devotional music at the beginning of the day provides "immense peace of mind". Some reported seeing daily vlogs on YouTube which include travel, food, and many other recreational purposes in between, especially between cooking or after completing daily household chores. Also, the trend of reading online newspapers among the age group of 60-70 was found among the respondents and most of them stated that this practice started from the time of Covid-19 to get the know-how of the world and now it has become their

habit to read it online, rather than reading it in the print version. The most common content which the respondent reported watching was different videos on Facebook, comprising news content, shorter funny videos, and others.

Perspective on Social Media Use in Smartphones

Various perceptions and attitudes emerged regarding social media usage. Most of the respondents stated that they are using smartphones (and not regular mobile phones) to maintain a connection with their children and especially with their grandchildren. As one stated: "*phone tai oder chobi da pai, proti din raat a video call kori tai WhatsApp use kori*" (With the help of smartphones, I am able to see my children, especially grandchildren and that is one and only cause of using WhatsApp). While another commented: *"ami kokhono phone ba anno electronic jinishe interested chilam na aage. Bole jeta pare, tomader bhasai 'technology illiterate' person kintu akhon Facebook, WhatsApp use kori somai katanor jonno"* (I was not that interested in technology, I was a technology illiterate person, however to spend time now I use social media platforms). Most of the respondents feel that social media has connected them with the outside world, it has acted as a bridge between them and the outer sphere, which was not possible otherwise. One of the elderly ladies said: *"ranna kore chobipathai, gach er chobi pathai, kothao gele chobi pathai meye k, ai korei saradin choleja."* (I spend time sending pictures to my daughter of what I cook, of my kitchen garden). Respondents were seen to share every minute details of their daily activities through WhatsApp with their families and friends. According to most of them, it almost feels like they are residing with their families.

Many of them were of the view that smartphones act as a source of security as well for them, which they can use at any time to connect with people during an emergency. The respondents have pointed out the negative side of the media as well, as one commented: *"ami pensioner, amar akta fixed income proti mash a, sekhane mobile er net recharge, maintenance er khorchai to anek"* (I have to depend on my small pension money and the rising price of internet connection

has become a problem). Also, the respondents pointed out the difficulties in the initial stage of learning, however, they learned as it became a "necessity". According to one of them: *"chele meyera baire thake, chaileo roj dakha korte parbona, bochhore akbar ase, mobile na sikhe upai ki"* (Since the children live outside the town, it became a necessity to learn how to use smartphones to maintain a connection with them). The participants were also seen to be influenced by their close family members and by the friends of their groups as well to start using smartphones and social media. Thus, the influence of the social network cannot be overlooked to understand people's perspectives on social media use.

Also, the respondents pointed out the advantages of smartphones during the time of Covid-19. Most of them stated that their smartphone usage increased at that time since performing everything online became the "*new normal*". The respondents stated that their children strictly prohibited them to go outside and thus smartphones became their only way of life from bringing things to interacting with people.

Age Differences in Smartphone Usages

The data collected revealed the fact that people in the age group 60-65 and 66-70 were comparatively more active on social media mostly on Facebook and YouTube and spent nearly eight to ten hours on average.They were also found to use apps like *Jiocinema* and *Hoichoi* to watch old movies more than other age groups. The people in the age group 71-75 were seen as more active on WhatsApp and YouTube, but most of them were less likely to use Facebook and other social networking sites. However, smartphone usage has been seen to be decreased in the age group 76-80, as according to most of them, they lack concentration but connecting with near ones in video calling was seen to be increased in this age group.

Gender Differences in Smartphone Usages

Amongst the participants, it was found that the male respondents belonging to the age group of 60-70 were more active on social media platforms than the women. However, the case is totally the

opposite in the age group of 76-80, where the female respondents were seen to socialize or maintain friendships over the phone only. It has provided women "a new, unobtrusive avenue to extend their contacts and space without moving out of their neighborhood" (Tenhunun, 2014).

Although the elderly men were found to be more active, it was the women who made more video calls than the normal phone calls to their family members, especially to their children and their grandchildren, than their partners. On average, the elderly of both sexes in the age group 60-70 spent less time on phone calls than the other age group. The female circle was comparatively smaller than the men and consisted of close and distinct kith and kins as well as several neighborhood friends, from whom they get a call or make a call. According to the respondents, calling their children twice a day for nearly 20 minutes a day, and 30-35 minutes at night is compulsory in their daily routine. One of the elderly women stated- "*sokal a meye phone kore besi, na korle ami kore. Raat a ami kori"* (it is her daughter who gives a mandatory call to her mother every morning, however, if she fails then the lady calls but, in the evening, she calls her daughter after they return from their work). It was evident that there is a fixed time allotted by the majority of the elderly respondents, in both the age groups to call their families and especially for video callings. The women were found to call their neighborhood friends as well if they fail to meet for a week or longer, which was not the case for the men since most of them reported going out for a walk or gossiping at the neighborhood tea stall at least once in a day with their friends.

Also, the women were found to receive more calls from their relatives than the men. They reported getting two-three calls from their relatives or neighborhood friends on average a week. Several of the respondents pointed out that since everyone has a busy schedule, it becomes difficult for relatives to call every day. However, respondents pointed out several occasions like '*Nababarsha'* (Bengali New Year) and *'Bijaya Dashami'* (the day when Goddess Durga

returns to her in-laws) where they receive more calls from their family members rather than text messages.

Quality of life among people using smartphones

Several respondents stated that they prefer doing certain things offline like banking, visiting doctors, and reading newspapers, however, they use online social media as a tool of communication. The respondents feel that smartphones have become a 'necessary tool' in their everyday life. The impacts like feeling connected and informed according to the respondents are the most positive impact of using smartphones.

It has been found that the respondents who use smartphones and social media from medium to large extent, experience better quality of life and less loneliness than those who do not use social media (out of many elderly couples, women were reported to use social media and not men). Social support gained through social media was perceived as a source of security by the individuals that in turn provided them with the assurance that they are part of a wider social network, according to the narrative of the individuals. Also, shared messages on WhatsApp, and Facebook according to them, keep them updated, and provide necessary news as well that helps them in their daily lives. The assurance that they got from social media was seen to have positive effects on their lives- suffer from less anxiety and less exclusion from social as well as interpersonal relationships.

The preferred form of interaction: Offline or online?

The respondents when provided with choices between offline and online interaction, only some of them preferred online interaction. Most of the respondents stated that although online social media have positively affected them and have provided them with a platform to reduce their loneliness by engaging them in online media, the feeling of 'proximity' is absent in social media. As one of them stated: *"Video call a kotha bola mane dudh er sadh ghole metano"* (video call is just a mere substitute for in-person interaction). According to the

respondents, smartphones and apps keep them busy in their idle lives but they could not replace traditional face-to-face interactions.

Discussion

According to most of the respondents, they had to adapt to the technology and apps due to loneliness in their later lives and also due to the reason that communication in the modern day has shifted to a digital platform like WhatsApp. Exclusion from interpersonal and social relationships led them to include themselves in the digital world. From the narratives of the respondents, it has been found that they perceive digital technologies to be inclusive since that has allowed them to maintain connections with their families, friends, and the wider social worlds. It has also allowed them to pursue their hobbies (some reported learning new recipes from YouTube), be creative, and help them in performing activities of their everyday lives. Smartphones are helping them to do tasks (like bringing medicines, groceries, and other necessary things online) independently, for which previously they had to depend on their family members. Social connectedness has been provided to them by their smartphones which according to them has helped them to overcome loneliness. Also, physical distance and limitation of time is no more a barrier for them to maintain social connections. Thus, all the smartphone users "reported feeling more engaged with their families" (Neves, *et al.*, 2017:13) but the narratives of several older adults clearly bring out the fact that they miss the proximity of face-to-face interactions in virtual communication.

However, it has also become evident that for some people having a smartphone is 'mandatory' and a 'status symbol' as well and that's why they have brought it for their parents but they are still not used to it in spite of having it for more than a year. Also, out of all the respondents, most of the male respondents in the age group 60-70 were seen to be more engaged with their smartphones and social media than the women are, which stands in contradiction with the argument of the UNECE Policy which stated that women are more likely to be active on smartphones than the men. The reason behind this is the patriarchal construction of women as representative of "ghar"

(inner space i.e., domestic sphere) and the idea of 'feminization of care' where the female respondents find it more important to maintain the responsibilities of 'domestic' than spending time on smartphones or in social media. On the contrary, it was found that the female respondents especially the widows belonging to the age group 70-80 are more active on social networking sites. It was found that doing away with their loneliness as their frequency of going out is less than the male respondents along with the reduced domestic responsibilities brought them closer to their '*thakurghar*' (a separate place in a Bengali household where every day prayer to God is practiced) and smartphones.

Digital literacy has been acquired by the respondents, however, digital hesitancy has not gone yet among the older adults, who were selected for the purpose of the survey. Although they were seen to be familiar with smartphones and social media, respondents were still seen to lack knowledge regarding what to do if their WhatsApp storage appears to be full, or if they fail to get network. However, the research portrays the fact that elderly smartphone users experience ageing 'more positively' than many others who do not use smartphones since it has curbed the feeling of loneliness to a greater extent.

Fourthly, the respondents stated that smartphones have provided them with the opportunities to keep themselves busy in activities which according to them have a positive impact on their physical and mental health and this is in tune with much of the research which states that technology can help in enhancing physical health (Uchino 2006). The respondents specially mentioned the contribution of the smartphone to curb their loneliness during the time of Covid pandemic when they were not allowed to go for their regular walks also. Technology like smartphones has also led to decreased feelings of anxiety and tension according to the respondents.

Also, it is evident from the findings that older adults who use smartphones experience positive aging as smartphones have a positive effect on their elderly 'selves'. This finding is in tune with the literature

that stated a positive relationship between aging and technology in later lives. Although smartphones have led to reduced loneliness and isolation among people, older adults still prioritized face-to-face interaction over the online medium. The respondents were seen to be "shifting constantly between off- and online environments in order to be with people and to explore things, including aspects of themselves" (Walton, 2021: 156). However, acquiring knowledge of new things has not led to the breakdown of older values, attitudes, and faith in them. They have adopted technology in their daily lives to keep themselves busy, and independent and to overcome the feeling of insecurity, loneliness, and being left out but smartphones have not become their family. It can be said that "smartphones have become a way of life but not the entire life for the aging population". More technological interventions are required to engage and help people to experience 'positive aging' by understanding their social, personal, and physical contexts.

Limitations of the Research

It was difficult to collect information from the respondents in the age group 60-80 for the interviews since many of them were not comfortable sharing their views. Also, as they live alone- widows or widowers and ageing couples, without their children, initially they were not free to allow me to take their interviews due to fear or apprehension. Moreover, several respondents after giving permission also, were found to be reluctant to express their viewpoints and opinions.

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Indian Journal of Gerontology
2023, Vol. 37, No. 4, pp. 476-487
ISSN : 0971-4189, UGC No. – List B, Science –121

Physical Activity and its Impact on Cognitive Behaviour among the Elderly Population of Central Lucknow

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ABSTRACT

Physical activities and exercises are promising non-pharmaceutical interventions for older adults in preventing age-related cognitive decline. The present study aimed at exploring the level of Physical Activity and its association with various determinants of cognitive difficulties such as depression, memory difficulties, and disruption among randomly selected 120 elderly (60 males and 60 females) of central Lucknow.International Physical Activity Questionnaire (IPAQ) and the Revised Memory & Behaviour Checklist (RMBC) were administered to see the relationship between physical activity and cognitive difficulties.The analysis of data indicated that the elderly population with more physical activity was found to have lesser cognitive difficulties as compared to those with less physical activity. Out of 120 respondents, 49.16 percent

were found to be engaging in high levels of physical activity. Out of all the parameters checked under the Revised Memory and Behavioral Checklist, females were found to have fewer memory difficulties and less disruption than males. For depression, the difference between the mean scores across genders was not found to be statistically significant. The two variables were found to be negatively correlated, with a correlation coefficient value of -.238. The correlation between the parameters namely memory difficulties, depression, and disruption tested through RMBC and level of physical activity was also computed and found to be -0.425, -0.121, and - 0.221 respectively. The correlation between the level of physical activity& memory and the correlation between memory of physical activity and disruption was found to be significant at the 0.05 level. The findings of this study will help policymakers create a comprehensive policy framework targeted at reducing the risk of developing cognitive impairment among the elderly.

Keywords: Physical activity, Memory, Disruption, Depression, Elderly

The most effective lifestyle factor against age-related cognitive impairment, according to several systematic assessments, is regular physical activity. McPhee, *et al.,* (2016) demonstrate that engaging in regular physical activity is safe for both healthy and frail older adults and that it lowers the risk of major cardiovascular and metabolic diseases, obesity, falls, cognitive impairments, osteoporosis, and muscular weakness.

Exercise has positive effects on brain health, and physical activities and exercises are promising non-pharmaceutical interventions for older adults in preventing age-related cognitive decline (Bherer, *et al.,* 2013; Milanović, *et al.,* 2013). According to Bull, *et al.,* (2020), in order to improve functional capacity and prevent falls, elderly people ought to

engage in diversified, multi-component physical activity at least three days a week.

Thinking, learning, language, logic, attention and focus, and visuospatial ability are examples of distinct cognitive abilities. Numerous research has examined the potential impact of physical activity on improving cognitive abilities as people age and has shown evidence of the beneficial benefits of exercise on brain health (Brown,*et al.*,2012; Chang, *et al.*, 2012; Bredin,*et al.*, 2013; Cherubal,*et al.*, 2019; Sekher, and Muhammad 2023). Similarly, the relationship between physical activities has been augmented by Tikka, *et al.*, (2020), who found that those elderly who engage in more physical activity are less likely to experience depression than their counterparts. Importantly, higher levels of physical activity have been found to be associated with lowered odds of incident depression across all levels of genetic vulnerability, even among people at the highest polygenic risk.

A recent study by Kumar, *et al.*, (2020) in the state of Odisha evidenced an inverse association between physical activity and cognitive decline. The need to analyse and augment the relational aspects of physical activity and cognitive behaviour has been felt considering the shrinking family sizes and changing social dynamics. The elderly are engaged in social interaction through physical and virtual modes. Social media has influenced the dynamics of fitness in all sections of society including the elderly population. The present study was planned to find out the relationship between physical activity and cognitive difficulties such as depression, memory difficulties, and disruption.

Methodology

Sample

120 respondents were chosen randomly from Lucknow's urban and rural districts to participate in this study. The majority of respondents were above 65 years old. 78 percent of the elderly were living with their spouse, and 74.16 percent were reported to be living in joint families as against 25.84 percent in a nuclear family setup. The

respondents were divided into two groups on the basis of their gender-men (N=60), and women(N=60).

Demographic data was obtained from the respondents from each location according to a pre-tested survey schedule.

Procedure

Survey methodology was employed to acquire the data. To test the level of physical activity among respondents, IPAQ was used. The International Physical Activity Questionnaire (IPAQ) developed by the International Consensus Group (1998) has two formats. The researchers used the short format and classified respondents based on their physical activity per week. The following criteria were used for scoring on IPAQ.

Those who scored High / Vigorous on the IPAQ engaged in physical activity for one hour per day. Scoring a moderate level of physical activity on the IPAQ means respondents were engaged in walking for at least 30 minutes per day OR 5 or more days of moderate-intensity activity and/or walking of at least 30 minutes per day. Respondents who did not meet any of the criteria for High/ Vigorous and moderate categories were classified under low levels of physical activity.

The Revised Memory & Behaviour Checklist (RMBC) developed by Teri, *et al.*, (1992) was administered to determine memory, and behaviour among the elderly.RMBC has 24 items and three components- disruption (8 items), depression (9 items), and memory difficulties (7 items). It provides a total score plus scores for three subscale memory-related problems, affective distress, and disruptive behaviors. Scores are computed for the presence or absence of each problem.

The potential score range for 7 questions of memory assessment is 0-28, the potential score range for 9 questions related to the assessment of depression is 0-36, the range of scores for 8 questions to assess the disruptionis 0-32, and the overall RMBC in the potential score range of 0-96. The scores were interpreted as the higher the

score, more were the cognitive difficulties. The scores were compiled, tabulated, and analysed for descriptive and correlational analysis.

a) Statistical Analysis

IBM SPSS Statistics version 20.0 softwarewas employed in the statistical analysis. Descriptive measures like frequency, percentages, mean and standard deviation and t-tests were computed. The impact of social connectivity on elderly citizens' cognitive behaviour was found through correlation analysis.

Results

a) Level of Physical Activity among Elderly

Table 1

Distribution of the level of Physical Activity among elderly

Level of Physical Activity	No of Respondents	Percentage
Vigorous	59	49.16%
Moderate	40	33.33%
Low	21	17.50 %

The percentage of elderly with moderate, and low levels of PA was 33.33 percent and 17.5 percentrespectively. Out of 120 respondents, 49.16percent were found to be engaging in high levels of physical activity,

b) Gender-wise distribution of Physical Activity

The number of male and female elderly engaged in various levels of physical activity is given in Table 2. Among the elderly population, 45 males, and 14 females were found to be engaged in vigorous levels of physical activity, and 25 males & 15

a) **Table 2**

Gender wise distribution of Physical Activity

Gender	Low	Moderate	Vigorous	Total
Male	8	25	45	78
Female	13	15	14	42
Total	21	40	59	120

Females were found to be at moderate levels of physical activity. A very small proportion of subjects were reportedly functioning at low levels of physical activity.

b) Physical Activity across Marital Status

More married elderly, approximately 1/3rd of the total elderly subjects (n=45) were following vigorous physical activity. Elderly living alone after the death of their spouse were found at low levels of physical activity (n=23) as compared to married elderly living with their life partners (n=9).

c) Cognitive Behaviour among the elderly

A descriptive analysis of the data consisting of the total score on the RMBC was done. The mean and SD for the RMBC total scores were determined to be 17.61 and 7.94, respectively. The results of a single sample t-test showed that there was a statistically significant difference between the mean score of the sample and the mean score of the population, with a t value of 9.53 (pd" 0.01).

d) Scores for different Revised Memory, and Behaviour Checklist metrics in relation to different marital status categories

In the sample, there were two groups of marital status: married and widowed/widower. 78 of the sample's respondents were married, and 42 were either widows or widowers. The distribution of the scores for different criteria, such as memory dysfunction, depression, and disruptiveness measured in RMBC, across categories of respondents' marital status was examined using the Independent Sample Mann-Whitney U test. In addition to the distribution of the depression score being consistent across marital status groups, a significant difference was found for Memory dysfunction and Disruption across marital status.

e) Gender-wise distribution of scores of parameters under the Revised Memory and Behavioural Checklist

The mean and standard deviation of memory dysfunction for males and females, respectively, were determined to be 9.30± 4.79 and 7.10± 3.46. The analysis of the significant difference between the

means revealed ap-valueof 0.001 (*p* d".0.01). Depression score mean and standard deviation for men and women, respectively, were determined to be 3.53±2.81 and 3.08±2.02. When the mean and standard deviation (SD) scores for disruption for males and females were calculated, they were found to be 6.91±3.68 and 5.60±2.498 respectively. The total mean and standard deviation RMBC scores were 19.61 ±9.25 and 15.61 ±5.78. The significance of the difference between the male and female means for different RMBC parameters was determined using an independent sample t-test. The difference in mean across genders for the parameters other than depression score was determined to be statistically significant.

f) Scores for different Revised Memory & Behavior Checklist parameters across different family type categories

The respondents were divided into those belonging to nuclear families and joint families. While 89 elderly subjects belonged to a joint family, 31 elderly subjects were found to be living in a nuclear family. The significance of the difference between categories of family type for each parameter examined in the RMBC was found to be $p > 0.1$, indicating that the distribution of scores for the different parameters was the same for all categories of family type respondents.

g) Total scores on the Revised Memory and Behaviour Checklist for the elderly population across levels of Physical Activity

The level of physical activity for old men and women is shown in Table 3. The total score's descriptive metrics are also given. The mean and standard deviation of the total score were found to be 14.96± 6.28 for respondents who reported high levels of physical activity, while they were 19.20± 8.19 for aged participants who reported moderate levels of functioning. The mean and standard deviation of the total score for respondents who engaged in low levels of physical activity were found to be 22.04± 9.15, respectively. The p-value for the significance test of the difference between the mean and standard deviation of the individuals across levels of physical activity was 0.0001 ((*p* d".0.01).

Table 3

Level of Physical Activity and Overall Results for the Elderly using the Revised Memory and Behaviour Checklist.

Level of Physical Activity	Mean ± Standard Deviation of the total score of Revised Memory and Behaviour Checklist
Vigorous	14.96±6.28
Moderate	19.20±8.19
Low	22.04±9.15

Through an independent Mann-Whitney U test, the distribution of the scores for various parameters, including memory dysfunction, depression, and disruptiveness tested in the RMBC, was examined. The significance threshold for each parameter was greater than 0.1, indicating that the distribution of scores for the different parameters was consistent across all levels of physical activity.

h) Correlation between Elderly People's Levels of Cognitive Behaviour & Physical Activity

The correlation between the level of physical activity levels and cognitive behaviour as determined by the RMBC score was analysed using Spearman's rank correlation. It is discovered that the two variables are negatively correlated, with a correlation coefficient value of -.238.

i) Correlation between different parameters under RMBC & level of Physical Activity

The correlation coefficient between the individual tested domain under RMBC and the level of physical activity was computed. The correlation between the level of physical activity and memory difficulties was found to be - 0.425** (significant at 0.01 level). The correlation coefficient between depression and level of physical activity was also computed and found to be -0.121. The correlation coefficient between disruption and level of physical activity was found to be - 0.221* (significant at 0.05 level).

Discussion

In this study, a substantial number of elderly population were found to be involved in physical activity. Elderly populations with more physical activity were found to have lesser cognitive difficulties as compared to those with less physical activity. Out of all the parameters checked under the Revised Memory and Behavioral Checklist, females were found to have fewer memory difficulties and less disruption than males. For depression, the difference between the mean scores across genders was not found to be statistically significant.

The correlation coefficient of -0.238 b/w level of PA & cognitive behaviour indicates a weak correlation between the two variables. The findings concur with the findings by Tikka, *et al.*, (2020) where the level of physical activity has been found to affect cognitive funding. The weak correlation suggests the strong probability of the contribution of other factors such as social connectedness to cognitive functions. The distribution of males and females was found to be the same across the levels of physical activity indicating that involvement in physical activity was equal for both males and females supporting the findings of Milanović, *et al.*, (2022). Additionally, in this study men and women who are more engaged in physical activity are found to have lesser cognitive difficulties such as disruption, memory difficulties, and depression. This particular finding substantiates the previous research findings. The significant difference between the scores obtained by the widowed elderly and those staying with their spouse on the Revised Memory and Behavioral Checklist, indicates that being a widow/ widower elderly was associated with a higher risk of cognitive impairment than married people.No difference in cognitive difficulties was obtained for the respondents belonging to joint family and nuclear family. The strength of the correlation between memory and level of physical activity was found to be more at -0.425 as compared to the correlation between level of physical activity and disruption at -0.221. It indicates that the level of physical activity

affects memory and disruption. The results also indicate that the elderly doing vigorous physical activities will have fewer memory problems and the respondents with low levels of physical activity will have more memory issues. Similarly, those with high levels of physical activity will have less disruption as compared to those with low levels of physical activity. An interesting finding is that out of the three parameters tested through RMBC, the correlation coefficient between the level of physical activity and depression was found to be small indicating a relatively weaker impact of the level of physical activity on depression as compared to memory difficulties and disruption. These findings indicate the importance of including physical activity in the effective intervention of the cognitive-related difficulties of the elderly. It is recommended that future research is conducted with constant variables to ascertain the relational aspects between the variables which could possibly affect cognitive difficulties among the elderly population.

Conclusion

With the significant rise in the number of older people and the age-related cognitive and physical decline among them, it is important to create awareness among the elderly and their caretakers regarding the importance of physical activity. The study augments the previous findings and also paves the way for future research. The findings of this study will help policymakers create a comprehensive policy framework to reduce the risk of developing cognitive impairment at the national level.

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Indian Journal of Gerontology
2023, Vol. 37, No. 4, pp. 488-506
ISSN : 0971-4189, UGC No. – List B, Science –121

Navigating Life and Old-age Alone: The Struggles of Elderly Half-Widows in Kashmir

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ABSTRACT

This research paper explores the challenges faced by eight elderly,sixty years and above, half-widows,whose husbands have disappeared in the last three decades, belonging to Baramulla and Kupwara districts in Jammu and Kashmir, were purposefully selected as participants. The study was conducted through in-depth interviews. The themes that emerged from the analysis of their narratives include the difficulty of navigating the legal system alone, the social stigma associated with being a half-widow, and the economic challenges of living without a husband. The women spoke about the impact of their husbands' disappearance on their mental health and their struggles to access health care and support services. The study highlights the need for interventions and policies that address the specific challenges faced by elderly half-widows in Kashmir. It calls for increased support for these women, including access to healthcare, financial assistance, and legal aid.

The paper emphasizes the importance of addressing the social and cultural factors that contribute to the vulnerability of half-widows, including stigma and discrimination.

Keywords: Disappearance in Kashmir, Elderly half-widows, Ageing, Mental Health.

The socio-cultural and religious values of Kashmiri society traditionally accorded a dignified position to the elderly. However, recent societal changes and a lack of preparedness in addressing subsequent challenges have resulted in further marginalization and alienation of the elderly within and outside of family settings.

Unfortunately, the elderly in Kashmir have endured particularly challenging life phases, having experienced a peaceful existence that was abruptly disrupted by political uncertainty and violence. They have encountered personal losses, witnessed widespread destruction, and as a result, suffer from various psychological issues (Sherlock, *et al.,* 2012).

Several factors contribute to the deterioration of overall health and well-being among elderly individuals in Kashmir, including the turmoil prevalent in the region. In recent decades, Kashmir has witnessed a substantial increase in the number of orphans, widows, half-widows, and other victims directly or indirectly affected by violence. Among these groups, Kashmiri women whose husbands have disappeared without a confirmed status are known as "half-widows" (APDP, 2011). These women, unsure of their spouses' fate, experience a continuous state of trauma and are referred to as "half-widows" due to the absence of closure (Ibid). Most of these half-widows were young at the time of their husbands' disappearance and are now entering old age, thus becoming elderly half-widows. Widowhood, although a common life event, presents a challenge that individuals generally adapt to over time (Beard, *et al.,* 2016). However, for half-widows, the unresolved fate of their husbands perpetuates a state of trauma, profoundly impacting their physical and mental well-being.

This paper aims to investigate the challenges faced by elderly half-widows in Kashmir and shed light on their experiences and needs.

Elderly half-widows are imprisoned on the "threshold" for an eternity. They have spent the previous several decades "waiting" in their liminal condition, dealing with ambiguous and difficult situations in what seems to be a liminal phase that has "fixed" itself. The elderly half-widows are faced with vulnerabilities and existential issues that have no clear solutions because they are essentially permanently locked in this situation (D'Souza, 2016).

Review of Literature

Jahangir and Shafi (2021) have highlighted the various sufferings that the elderly people in Kashmir face both at familial and societal levels. It has been argued that the way the socio-cultural and religious values which were giving the highest place to the elderly have now diminished and that abrupt changes at social and cultural levels have included the well-being of elderly in the society. The paper is based on narratives taken from semi-structured interviews with 50 elderly women and 10 resource persons. Warr, *et al.,* (2018) have made an attempt to examine the changing nature of society due to political turmoil and its impact on the elderly population in Kashmir and the various psychological issues faced by them. The authors in the paper have used several psychological tools to assess the psychological issues faced by them which in turn had a great impact on their physical health as well as their social ability to lead a happy life. Bodha (2017) gives a psycho-social analysis of elderly people in Jammu and Kashmir and also discusses the multiple health issues faced by the elderly. As per the author, the inadequate care of the elderly in later stages is a matter of great concern. It reflects the satisfied lifestyle of elderly people in the state but mental health issues are on the rise due to the turmoil in the region. Their study highlights the issues like depression; alienation and general weakness which are very common among the elderly.

Digiacomo, M., *et al.*,(2013) in a longitudinal mixed-method study attempted to understand the experiences and needs of older women after their husband's death. For this study 21 community-

dwelling widowed women in an average age group of 71 have been taken for the study. It highlighted that the majority of the participants scored within normal ranges of anxiety and depression while a subset of participants had elevated levels of these conditions. The findings of the paper reveal that an increasing number of older women are living with multiple chronic conditions and thereby are posing a great challenge to health care services. The transition of women to widowhood requires multidimensional support both at the governmental as well as societal levels. Carr,D., *et al.*, (2001) have examined psychological adjustment to widowhood based on whether the death was sudden or anticipated. For the study, 210 widows were studied over a while. As per the findings among the older adults sudden spousal death doesn't have more effect on mental health except for increasing intrusive thoughts during the first six months after widowhood whereas anticipating a spouse's death over a long period seems to be increasing more anxiety for both men and women. In both cases, widowhood was a very challenging phase of life and authors have suggested great care and support to widows both at familial as well as societal level. Kazi,S., (2009) builds worldwide lessons from the daily realities of women living in Kashmir while navigating through the political and regional adversities that expose them to sexual assault, murder, family devastation, widowhood, grinding poverty, and societal death..... .

Over the 30-year political turmoil in the Indian state of Jammu and Kashmir, women have suffered the worst treatment, being raped, tortured, crippled, and killed. Moreover, the number of men who disappeared has been so high that a new word, "half-widows," has been coined for their destitute spouses. Women's experiences in the armed war in Jammu and Kashmir are the focus of Qutub, S., (2011). The researcher has concentrated solely on how armed conflict has affected a certain group of women known as "Half-Widows," or those whose husbands have been reported missing in action. Twelve Half-Widows in Jammu and Kashmir's Srinagar and Ramban areas provided their narratives for the study, which is a qualitative investigation. The

study highlighted the complexity of these people's circumstances. The researcher has provided a thorough overview of their lives as well as the social, economic, legal, and psychological crises they are currently experiencing. According to the study, Half-Widows frequently experience immense hardships and adversities. They are required to manage their homes independently, look for employment to support them, and create a dignified existence for their families. The researcher has also concentrated on the initiatives taken by these women and their fight for their rights and entitlements as well as for the justice of their missing spouses. The researcher has provided a thorough overview of all the concerns that these women have to deal with daily, starting with the disappearance of their spouses and continuing through the subsequent troubles. The study has highlighted how these women's everyday struggles have caused a shift in their gendered roles, forcing them to support their families financially. Additionally, the researcher has talked about how the severe officialdom, social apathy, and official silence on the missing people's fates worsen their issues.

The situation of Kashmiri half-widows is also highlighted by Shukla (n.d.). The author argues that the political strife in J&K has brought forth bitter currents, long-forgotten memories, and significant loss of lives and property. The author notes that although some victims are virtually unseen, others are highly prominent. Half-widows are what the author refers to as the quiet or undetectable victims of violence. Kashmir's disappearances have produced a climate of terror that undermines the missing people's relatives and causes harmful collateral damage. The author draws attention to the fact that many half-widows in Kashmir who don't come from well-off families are living in poverty and dealing with a variety of psychological disorders related to the conflict, including a propensity toward suicide. The author examines how strife has affected half-widows' quality of life and explains the contention that society as a whole and the state, in particular, exclude the needs, concerns, issues, participation, and rights of women in general and half-widows in particular. The author has talked about the problems

facing women in this area and believes that they are not included in discussions of state policy.

The plea of the spouses of the missing people was highlighted in the literature (Pamela 1999). She draws attention to the fact that the agencies and, in certain cases, the relatives of the spouses of the disappeared victims target the wives (half-widows) in particular. To highlight the religious aspect of the half widows' issues, which directly affect their inheritance rights, the author has cited the Muslim Personal Law, which states that a person cannot be officially ruled dead until seven years have passed from their disappearance. Their property cannot be sold before that time. She contends that half-widows, who are frequently connected negatively with violence due to the disappearance of their spouses, have even less chance of finding love again.

It is revealed that elderly women in Jammu and Kashmir are suffering hugely because of the hectic life they have led. Being the indirect victims of conflict they have spent their whole life in crisis, and now being in old age they are suffering from various mental health issues which in turn had an impact on their physical health. These women were from low economic background and their dependence on the children had made their life very difficult.

The Rationale for the Study

This study is essential due to the profound psychological impact experienced by elderly half-widows in Kashmir. These women have been living in a state of continuous trauma as they await closure regarding the fate of their missing spouses. The lack of resolution and uncertainty surrounding their husbands' whereabouts have detrimental effects on their mental and emotional well-being. By exploring the specific challenges faced by these elderly half-widows, this research aims to bring attention to their unique circumstances and contribute to the development of appropriate interventions and support systems to improve their overall quality of life. Additionally, this study will help raise awareness about the marginalized status of the elderly population

in Kashmir and promote a more inclusive and empathetic society that addresses the needs of this vulnerable group.

Method

For the present study, a total of eight elderly half-widows from the Baramulla and Kupwara districts in Jammu and Kashmir were purposefully selected as participants. Only individuals aged 60 years and above who expressed willingness to partake in the study were recruited. The process of data collection commenced by visiting non-governmental organizations actively involved in addressing the issue of enforced disappearances. During these interactions, the researcher engaged with the staff members of these organizations, establishing significant contacts in the field. The researcher also actively participated in various programs and awareness campaigns organized by different voluntary agencies, enabling the opportunity to meet a substantial number of half-widows in one location, who later became participants in the study.

Discussions with various field-based organizations were conducted to get a deeper understanding of their issues. The researcher looked into the news reports, did a wide range of readings on the issue, watched documentaries, and interacted with activists who were engaged with the issues of these women and the people who had already worked on the issue.

The researcher started the process of meeting elderly half-widows at their homes to get a first-hand account of their lives and observe the environment in which they were living, to get a holistic understanding of their issues. Convincing the women to speak about this unpleasant incident was not that easy. It was explained to the participants that the study is completely an academic exercise and has nothing to do with any government or NGOs. It was only the rapport that the researcher built with the respondents that allowed the free flow of information from the respondents to which a patient hearing was given by the researcher. More emphasis was laid on an empathetic approach towards the respondents. Being trained social workers, the researchers

had kept full consideration of social work ethics and principles while dealing with elderly half-widows. To respect each respondent's right to decline or withdraw the consent, informal oral consent was obtained from each respondent. The majority of respondents were illiterate, thus a thorough verbal summary of the aim and scope of the study was delivered to them in their native tongue.

Findings and discussion

After the careful analysis of the data reflecting participants' lived experiences the following themes that have emerged include economic, social, and mental challenges along with related issues like dependence on children, dealing with their old age, and the legal battle that is seen as a punishment in itself. The discussions on the same have been discussed in the coming sections.

Economic crisis faced by the elderly half-widows

Women become economically vulnerable while their husbands are absent. Such susceptibility results in destitution in families that are already socioeconomically weak, which is the situation of the majority of families that have experienced disappearances.

Typically, the spouse is the only source of income for the family, so when he disappeared, financial conditions suddenly become tight. Also unavailable to half-widows or elderly half-widows are a number of other possible sources of help, including the distribution of ration cards and the transfer of the husband's assets or bank accounts. This is because these procedures either call for death certificates, which women lack because their spouses are not considered legally dead, or government verification processes, which typically end in the inquiring officer marking the individual as "missing" (often with the suspicion that he is an underground or over-ground militant). An elderly half-widow spoke about her sufferings and disclosed the following:

"Now and then someone comes to hear our story. But I have been raising these girls without a father. I don't need to be reminded of that. I need jobs. Can someone provide my daughter with a job?

We aren't asking for handouts...they will work. I have educated them, as a single mother."

The elderly half-widow is typically not prepared to start working for her family, either socially or educationally. She thus becomes reliant on others, frequently the husband's relatives (given the cultural context where parents live in a joint family with their sons and daughters-in-law, not with their married daughters). After the disappearance, relationships in the in-laws' family frequently deteriorate. The elderly half-widows are considered additional mouths to feed and perpetual reminders of the family's loss.

Recollecting the trauma an elderly half-widow said,

"My life turned upside down after the disappearance of my husband. I was depressed after my in-laws abandoned me. My in-laws now seem to have a life of their own and don't want to bear the expenses of me and my daughters; they threw us out of the house. I had no place to turn except my natal home."

In addition, according to Muslim law, the father may, but is not obligated to, donate property to his son's heirs if the son passes away while the father is still alive. The missing son is sometimes ruled out as dead when making inheritance decisions, which results in their children receiving nothing (or, at best, nothing until the grandfather's passing). As a result, they frequently also do not get financial respite during this quarter.

One participant gave the following example to illustrate this point:

"For my in-laws, my husband's absence was a blessing in disguise since it allowed them to quickly claim or seize his portion of inherited property. They rendered me and my kids homeless by doing the same thing without showing any remorse. Without the assistance of my mother's family, we would have been begging on the streets".

"When my husband disappeared I was young at that time I did everything to feed my family but now I am old I am not able to do anything"

"It has been a long time since my husband disappeared I had some savings at that time but I spend the whole either on knowing the whereabouts of my husband or in the upbringing of my children, I haven't kept a single penny for myself. Now I am fully dependent on my children."

Economic dependence is the biggest issue elderly half-widows are facing now; the dependence on the children for every small thing is a matter of concern. Because of their husband's uncertain status, they are not even eligible for widow pensions.

Social Challenges of Elderly Half-widows

Because of the length and ambiguity of their husbands' absence, elderly half-widows are particularly exposed to dangers to their physical and emotional health. While social networks have helped the majority of elderly half-widows cope with their sorrow, societal attitudes have occasionally made them feel even more devastated.

Even at the age of over sixty, elderly half-widows are irrationally held responsible for the loss of their spouses. For instance, the ladies may be informed that they are the cause of the family's misfortune or that their terrible behavior or actions caused the disaster.

One more participant remembered

"When people want to hurt me they say things like 'Your face (fate) is like this, which was why your husband disappeared."

Elderly half-widows also run the same risks as any other impoverished, single females in any underdeveloped or poor society. They have very little physical protection, if any, and run a high risk of losing their land. Some of the elderly half-widows become targets of daily violence from those viewing them as defenseless without a partner. They are facing threats to their life and harassment which sometimes makes them regret the decision to follow the disappearance cases of husbands.

While recollecting the trauma an elderly half-widow revealed

"I spent most savings on messengers in the hope that they could get a trace of my husband until one such man started calling the house

at midnight, insisting on speaking with my 30-years old daughter. I had to accept that this was a dead end. I couldn't afford to lose my daughter as well. Then I stopped searching him altogether".

Years passed but nothing changed for elderly half-widows, their unending search did not reach any logical conclusion. Even after facing continuous threats to their own lives as well as their families from both militants as well as other armed groups, elderly half-widows are continuously struggling for searching their disappeared husbands. While revealing the threats faced in seeking the whereabouts of her husband an elderly half-widow revealed:

"Once I started going to the State Human Rights Commission (SHRC), some armed groups came threatening us. They said, "Do not pursue the case, and don't go to the police". I had nothing to lose as I was already three parts dead. I just thought, if I don't do this now... then they will do the same to someone else tomorrow. I just kept silent pursuing the case. But now my children are stopping me to pursue my case they feel shame if I participate in sit inn's or go to the police station"

Elderly half widows now being dependent on their children have to follow the rules set by their children, they no longer are free to go anywhere in connection to tracing their missing husbands. Being elderly they are highly dependent on others for travel and always need someone to be accompanied but their children and grandchildren being busy in their own lives hardly allow them for such things.

Old age and illness

Health status declines when age increases and consequently, many physical, psychological, and behavioural issues emerge. Elderly half-widow social exclusion and taboos have elevated health issues including hypervigilance, relapse, insomnia, nightmares, trauma, and other emotional difficulties. According to testimony, in addition to arthritis, diabetes, eyesight, hearing, kidney, and gastrointestinal problems are on the rise. One of the elderly half-widows expressed:

"The disappearance of my husband took a heavy toll on my physical health. I am suffering from diabetes, hypertension, and thyroid post my husband's disappearance. My medical bill would often amount to 3000 which in time became difficult for my son to arrange."

"In old age life partner is the most important support as children are busy in their own lives and this loneliness is killing me, I am just waiting for my death."

Social support is very important for the health and well-being of the elderly but as far as these half-widows are concerned the uncertainty about their husbands had made them lonely. The emotional trauma and continuous struggle have deteriorated the physical and mental health of half-widows.

Mental health issues among elderly Half-widows

The mental health of women is adversely affected by forced disappearances. Symptoms including nightmares, anxiety, despair, guilt, and wrath are frequently mentioned, along with others like avoidance, continual awareness, and sleep disturbances. While the stress of a disappearance manifests somatically in some women as high blood pressure, persistent fatigue, and chronic pain. Other women have experienced mental impairment and memory lapses.

The majority of elderly half-widows experience sleep issues, anxiety (commonly characterized as "speeding up" or palpitations), and a lack of interest in routine tasks. Post-traumatic stress disorder (PTSD) is common in elderly half-widows; anxiety attacks may be brought on by thoughts of the disappearance or the gone. In its Out Patients' Department, the Government Psychiatric Diseases Hospital in Srinagar continues to see several patients each day. Doctors there say that they do not frequently see elderly half-widows or other relatives of the missing come in for care; yet, the families still harbor optimism despite the toll of maintaining that hope has taken on their own mental health. It is common for elderly half-widows to self-medicate by using readily available antidepressants, which might lead to severe health problems. An elderly half-widow shares:

"I often wake at night with an uneasy sense of choking and being trolled. My breathlessness and heart palpitation last all night. Lose of my spouse puts me in the position of loneliness. It's tremendously painful that everything fades away and only grief is left. This trauma can affect my mental and emotional well-being. The disappearance of my husband has left me in never-ending psychological agony."

"The mental state of elderly half-widows can best be described as Complicated Grief. Frankly, it is an understudied population. But these women exhibit a one-track-mindedness that both sustain them as well as further entrenches their grief. They are constantly searching and waiting." –Psychiatrist, Srinagar.

Elderly half-widows are disproportionally subject to emotional and mental problems. The incidence of psycho-pathology rises day by day. Functional disorders –notable depression, paranoid states and brain organic disorders increase steadily with each decade.

"Many elderly half-widows coming these days are hyper-sensitive and show signs of depression. We treat them as cognitive behaviour therapy"

Dependence on children

Half-widow circumstances deteriorate as they age since they are unable to work and must rely on their offspring for upkeep and welfare. They are more susceptible to family members' abuse. They are viewed as an unnecessary burden. They get a dreadful sense of redundancy themselves.

Adding to this is the depressing anxiety of not knowing just how far ahead one must plan for how long one is faced with financial dependence on children to meet her requirement. This plays havoc with the lives of the elderly half-widows. They live life without care and concern. She finally sits in the shade.

One participant shared with tears

"I have spent my whole life taking care taking care of my three children without a spouse. Being a single mother, life was not easy for me. Every day, I struggled for satisfying biological needs like food,

shelter, clothes, and medicine for my children. Now my children are mature enought to fulfill their responsibilities i.e. marriage and parenthood. They are paying less attention to me and I feel as if I live in an unsupportive environment. My entire struggle for them has been in vain."

Half-widows are less likely to have access to a pension, and the disappearance of a spouse leads to destruction for them in older age. They are vulnerable to multi-dimensional problems. It's revealed by one of the elderly half widow participant

"Now I am dependent on my children in terms of medicine, food clothes, and day-to-day needs. I even can't claim pension or widow relief as I have no positive vote for it from my children."

The process as punishment

These women's first and most important job following the disappearance of their loved ones is to file an FIR at a police station. However, the police frequently refuse to do so, claiming that their spouses may have traveled to Pakistan for military training following the official story.

One of the participants' cases was this.

"They have dubbed my husband as a militant because of which I was not even eligible for ex-gratia relief and even my children are now facing issues in getting their legal documents"

"I have stopped all legal procedures as my children don't allow me; now they want to live peacefully"

"Every month I was the first person to participate in monthly sit-in protests but now I am not able to go because of my health issues"

Many other women, like her, have experienced the same horror and have looked for their husbands while in jail, while camping, and even while traveling outside of Kashmir. Although even after filing an FIR, family members are aware that the armed groups are immune from court scrutiny and that there is no legal recourse available for residents to object to incarceration or abduction. In addition, there is no official record of anyone held against their will by armed groups.

This precludes people from using a writ of habeas corpus to seek relief and from asking for and getting information about disappeared people. As most of the half-widows have spent their whole life in tracing their disappeared husbands through all legal and non-legal procedures but their children are not now ready to follow the same as they have their own life.

Key Recommendations

The following recommendations are proposed to start the process of their rehabilitation and providing some relief in their old age :

- ***Initiate and strengthen psycho-social support*** **:** Efforts should be made to establish government programs that provide psychological and social support to elderly half-widows. These programs should focus on addressing their emotional well-being, facilitating social integration, and combating the stigma associated with their identities. Collaborative partnerships with NGOs specialized in mental health can enhance the effectiveness of such initiatives.
- ***Enhance family support*** **:** Recognizing the significant challenges faced by elderly half-widows, it is crucial to emphasize the importance of strong family support systems. Families should be encouraged to create a nurturing environment that promotes the well-being and dignity of these women, taking into account their past hardships and ongoing struggles.
- ***Provide bereavement counseling*** **:** Accessible and professional bereavement counseling services should be made available at local healthcare centers to assist elderly half-widows in coping with their feelings of loneliness and sadness. These counseling sessions can help them navigate the process of grieving and provide them with the necessary support to face their loss.

- ***Foster community support*** **:** Communities, including Mohalla committees and Baitul-Maal, should actively engage in supporting elderly half-widows. This support can extend beyond financial assistance to include emotional and physical support, creating a sense of belonging, and enabling these women to lead dignified lives.
- ***Conduct comprehensive research*** **:** It is essential to conduct in-depth research studies to gain a deeper understanding of the unique challenges faced by elderly half-widows in the region. Existing knowledge gaps regarding this population should be addressed through rigorous and comprehensive research, enabling the development of targeted interventions and support programs.
- ***Streamline judicial processes*** **:** Efforts should be made to expedite judicial procedures relating to cases of disappeared persons, including those involving elderly half-widows. Establishing a dedicated bench within the Jammu and Kashmir High Court, committed to delivering impartial and timely judgments, can ensure the prompt resolution of their legal concerns.
- ***Issue a certificate of disappearance*** **:** Recognizing the impact of enforced disappearances, authorities should consider introducing a "Certificate of absence" instead of a death certificate for disappeared individuals. This official document would acknowledge the missing status of the person, facilitating access to social security benefits and property rights. Additionally, extending pension and widow-related benefits to elderly half-widows can provide some relief and address their specific needs

Conclusion

Even though they are not frequently visible in leadership roles, Kashmiri women have fought against the stigma of being labeled as "victims" during the turbulent decades and played a significant part in

civil society. Elderly half-widows are a glaring and harmful, frequently unnoticed, face of Kashmir's instability that prevents greater progress. Due to their husbands' forced disappearances, elderly half-widows experience severe violations, including harassment by armed groups, societal shame, and social isolation. Despite this, they have sought the restitution system and experienced more abuse. They have experienced harassment when going through administrative or legal procedures, and government offices have often fallen short in helping elderly half-widows, adding to their difficulties. It's critical to comprehend why the gender factor is conspicuously absent in the instance of Kashmiri elderly half-widows, where a hierarchy of victimology has started to emerge. The breaches committed against them are either not acknowledged or are overlooked, and positive law frequently only has a limited understanding of them. Their issues are made worse by distrust and societal shame. Both institutional and informal assistance are in short supply. Along with this, a lot of these women come from poorer socioeconomic situations and have very limited literacy and ability levels. In these conditions, elderly half-widows seek out paid employment mostly using their physical abilities, which can diminish stress, poverty, and age.

Limitations of the study

The study has several limitations that should be taken into consideration when interpreting the findings. Firstly, the small sample size of only eight elderly half-widows from specific districts in Jammu and Kashmir may limit the generalizability of the results to a larger population. Also, the participants may have experienced burnout or exhaustion due to their repeated involvement in research activities and data collection efforts by various researchers and agencies. This could have influenced their willingness to fully engage in the study and provide accurate information. Additionally, some participants may have developed false hopes or expectations based on previous interactions, potentially affecting their perceptions and responses during the study. The study's contextual limitations, conducted in specific districts, may also restrict the generalizability of the findings to other regions. It is

critical to note these limitations to guide future research endeavors in addressing these gaps for a more comprehensive understanding of the issues faced by elderly half-widows in Jammu and Kashmir.

Acknowledgment : This Research study was sponsored by the Indian Council of Social Science Research (ICSSR), New Delhi.

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Indian Journal of Gerontology
2023, Vol. 37, No. 4, pp. 507-519
ISSN : 0971-4189, UGC No. – List B, Science –121

Effectiveness of Preksha Meditation on Memory among Older Women

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ABSTRACT

The present study was designed to determine the effects of Preksha Meditation on memory among 80 older women. The participants were randomly divided into an experimental group (n=40) and a control group (n=40). For pre and post-study memory evaluation, the Set-Test from the PGI battery for assessment of mental efficiency in the elderly (PGI-BAMEE-KAVSPD) was used. For 90 days, the experimental group practiced the Preksha Meditation intervention for 45 minutes. At the Post-3 level, the mean memory scores were higher in the experimental group than in the control group. Therefore, there was a statistically significant difference between the groups ($p<0.01$). On the basis of the present findings, it may be concluded that the Preksha Meditation intervention helped the elderly improve their memory.

Keywords : Memory, Older Women, Preksha Meditation.

Cognitive decline is a natural aging process where the brain undergoes various structural and functional changes. The brain's size shrinks and experiences loss of neurons, synapses, and decreased

neuronal network efficiency. Changes also occur in cerebral vasculature and metabolism while increased inflammation levels are seen. These changes can result in impaired cognitive function such as memory loss and reduced thinking ability. However, minor memory issues do not invariably suggest dementia (Murman, 2015).

To slow or improve cognitive decline with ageing, the focus should be on maintaining a healthy lifestyle. This includes maintaining good cardiovascular health and becoming and staying physically, mentally, socially, and culturally active (Older, 2020). Management of comorbidities is essential as well. Mentally stimulating activities, introduced even during midlife, can reduce the risk of cognitive decline, as they can contribute to maintaining brain health (World Health Organization, 2019). Most of studies recommended strategy is to engage in at least 2.5 hours of moderate activity per week. These activities could range from activities like brisk walking, swimming, and gardening to mental wellness practices such as meditation and yoga (Ministry of Health, 2020). Studies have shown positive effects of practices like yoga and meditation, especially Preksha Meditation, on improving memory and cognitive health in the elderly. They are cost-effective, non-invasive, carry minimal risk of adverse effects or drug interactions, and do not require medical supervision. Therefore, these interventions, along with other non-pharmacological approaches, could be beneficial in improving and slowing cognitive decline in the elderly.

According to Arora (2002), failing memory is often regarded as a sign of ageing because memory is a critical component of all cognitive processes and maintains information over time.As people grow older, the memory system undergoes changes, hence older adults can experience forgetfulness. However, this does not mean that forgetfulness is an inevitable consequence of aging. Older adults worry about their memory and other thinking abilities. Memory issues can be due to various reasons, including depression, infections, or side effects from medication, and make it difficult to manage daily activities (National Institute of Aging, 2020).

Preksha Meditation

Preksha Meditation, originating from Jainism, is effective in promoting better mental health and cognitive function, especially among the elderly. This is achieved by improving concentration, enhancing patience, boosting memory power, and developing thought processes, imagination, visualization, and decision-making skills. The efficacy of Preksha Meditation can be attributed to its method of carefully and profoundly perceiving oneself. The word "preksha" itself is derived from the root "iksha," which means "to see deeply". With the addition of the prefix "Pra," it forms "Pra+iksha," conveying the meaning "to perceive carefully and profoundly". The act of meditation involves the "concentration of thinking on a particular subject for a time," allowing individuals to focus their mental energy and attention, thus culminating in an improved mental state (Mahaprajna, 1993). The meditation practice works by requiring practitioners to spend dedicated time focusing their minds and perceptions, which in turn results in these various mental and cognitive improvements. It also has benefits on physical, social, and environmental health and stress levels.

In recent years, there has been increasing interest in exploring the effectiveness of various meditation techniques in improving cognitive function, particularly in older adults. One specific meditation technique that has gained attention is PrekshaMeditation (Magan & Yadav, 2020). Preksha Meditation is a practice that has been found to enhance attention skills, and it has been suggested that these skills may have psycho-neuroimmunological effects on memory (Ibid). Several studies have reported positive impacts of meditation on intelligence, attention, learning ability, cognitive abilities, executive function, short and long-term memory, and improved scores on various cognitive tasks (Sanchetee, *et al.,* 2017).

Sanchetee, *et al.,* (2017) conducted a study on 58 elderly subjects evaluating Preksha Meditation's effectiveness in promoting mental health. The findings showed that Preksha Meditation was effective in mental health, physical health, social health,

environmental health, and stress levels. Bhatt (2017) conducted a study on 100 elderly individuals to determine the effects of Preksha Meditation on death anxiety and adjustment problems. The subjects of the experimental group were integrated into the intervention of practicing Preksha Meditation for 45 minutes daily for four months. Significant changes were observed in some variables, and gender appeared to have a main effect on death anxiety and adjustment in elderly males and females after practicing Preksha Meditation. Soman (2018) discussed a study where the results revealed that the psychological attributes like memory, anger, positive and negative effects were all impacted with the practice of Preksha Meditation by the experimental group. Kurmi, *et al.,* (2019)studied the impact of mindfulness meditation on attention and working memory in the elderly with age-induced decline. The meditation group showed a significant improvement ($p<.05$) in scores on the Digit Span Test compared to the non-meditator group after a 45-day period. Chobe, *et al.,* (2020) conducted a systematic review of yoga-based interventions, like Preksha Meditation, and their evidence of positive impacts on cognition and mental health among the elderly. Pragya, *et al.,* (2021)explored the effects of an 8-week Preksha Meditation course on college students' pulmonary function, cognitive ability, and happiness. Although it is not focused on elderly populations, the positive results yield implications for wider application.

Method

The purpose of this experimental study was to test the efficacy of Preksha Meditation on memory in older women. 80 older women with a mean age of 72.3 years were selected from Rotary Orchards' Chaitanya Senior Citizen Home and Mahalakshmi Senior Citizen Centre in Bangalore. More specifically, the experimental group (N=40) had a mean age of 74.45 years, while the mean age the subjects of control group (N=40) was 70.15 years. Most of the subjects were reported to be either married or widowed and were having higher Socio-Economic Status.

Research Design

It was hypothesized that Preksha Meditation will significantly affect memory in the subjects of the experimental group.

To test the hypothesis the 80 participants were randomly selected and allocated into two groups of equal size (40 and 40) respectively, i.e. experimental (Preksha Meditation) group and the control group. The older women, who had never practiced Preksha Meditation before, were selected for the study. All of them expressed their willingness to participate in the study, and the signed informed consent of each subject was taken. The total study period was 90 days, with four study schedules. The Pre-test was initiated on the first day with an assessment of the questionnaire; the first follow-up (Post 1) was conducted during the 45-day intervention of Preksha Meditation; the second follow-up (Post 2) was after the COVID-19 lockdown; and the third follow-up (Post 3) was conducted at the end.The control group subjects were not given any PrekshaMediation training and lived their routine life without any specific instructions.

Variables

Preksha Meditation

The efficacy of Preksha Meditation can be attributed to its method of carefully and profoundly perceiving oneself. The word "preksha" itself is derived from the root "iksha," which means "to see deeply". With the addition of the prefix "Pra," it forms "Pra+iksha," conveying the meaning "to perceive carefully and profoundly". The act of meditation involves the "concentration of thinking on a particular subject for a time," allowing individuals to focus their mental energy and attention, thus culminating in an improved mental state (Mahaprajna, 1993). The meditation practice works by requiring practitioners to spend dedicated time focusing their minds and perceptions, which in turn results in these various mental and cognitive improvements. It also has benefits on physical, social, and environmental health and stress levels.

It contains three steps :

A. SukshmaVyayama (Sukshma Kriya)

The 13 simple exercises for every limb, from head to toe, are an integral part of Preksha Meditation, make the body active and energetic

B. Kayostarga (Relaxation Technique)

This practice aims at achieving total relaxation along with self-awareness. Kayostarga is often used to reduce stress, increase mindfulness, and improve emotional wellbeing. It involves giving up attachments and achieving a perfectly dormant state of the body. It involves achieving steadiness of mind through the steadiness of breath, which can only be achieved with physical immobility. The technique involves practicing proper breathing to achieve kayotsarga, as breath is its parameter. It involves a balance of prana (life force) which is achieved in the pose of Kayotsarga. Auto-suggestion serves as the primary principle of this relaxation technique(Mahaprajna, 1993).

C. ShvasaPreksha (Perception of Breath).

ShvasaPreksha, or perception of breathing, is an important component of Preksha Meditation, in which the mind fully engages in perceiving the breath. The individual should be aware of each inhalation and exhalation, consciously taking each breath while their mind stays linked with the breath. This practice is an opportunity for the mind to be fully in the present moment

Tool used :

The Set Test of Assessment of Mental Efficiency in the Elderly, P. G. I. Battery (PGI-AMEE-KAVSPD, Kohli, Verma and Pershad, 1991). The PGI battery consists of four sub-tests: the set test, the standard ten, Nahar and Benson's test and a geriatric depression scale.In this study the researchers used the Set-Test scale from the PGI battery to test the Mental Efficiency of the Elderly.

Description of the set-test and Scoring System : It is called the rapid test of mental functions, and it is a verbal test wherein the subject is required to recall ten items in four different common

categories, which include colours, animals, fruits and towns or cities. It requires motivation, alertness, memory and concentration. Every correct response is given a score of one, ranging from 0-10 in each category. A maximum of 10 points is awarded for each item and 40 for the total. A higher score indicates greater efficiency.

Intervention (Duration of Intervention (45 minutes) for 90 days

Statistical Analysis

The statistical analysis was performed using SPSS version 20 software. The descriptive statistics mean, median and standard deviation were obtained for the variable memory.

The Nonparametric Tests – Mann-Whitney U test was conducted to see the significant difference between experimental and control groups. Friedman test was performed to see the significant difference between Pre-test, Post-test 1, Post-test 2, and Post-test 3 for all variables among experimental and control groups separately.

Results

Table 1

Comparison between Experimental Vs Control Groups for the Memory domain.

Variables		Experimental Group (n=40)			Control Group (n=40)			Mann-Whitney U test	
	Test	Mean	Median	SD	Mean	Median	SD	|z|	P value
Memory	Pre	32.35	35.00	7.32	27.38	25.50	7.20	-2.994	.003**
	Post 1	35.53	40.00	6.08	27.13	26.00	6.66	-5.167	.000**
	Post 2	36.53	40.00	5.48	27.50	28.00	7.15	-5.632	.000**
	Post 3	38.63	40.00	2.99	24.13	24.50	7.66	-7.301	.000**

* Indicates significant at P< 0.05 ** Indicates significant at P<0.01

In summary from Table 1, the mean scores of memory during– Pre-test, Post-test 1, Post-test 2, and Post-test 3 were higher in experimentalgroup than compared to control group. Therefore, there was a statistically significant difference between the groups ($p<0.01$).

Table 2

Comparison within variables (Pre-Post1-Post2-Post3) for Memory in Experimental Group (n=40).

Variables	Test	Mean	Median	SD	Chi square (3)	P value
Memory	Pre	32.35	35.00	7.32	36.809	0.000**
	Post 1	35.53	40.00	6.08		
	Post 2	36.53	40.00	5.48		
	Post 3	38.63	40.00	2.99		

* Indicates significant at p< 0.05 ** Indicates significant at p<0.01

From the above Table 2, one can observe that the mean scores of memory, for all tests–Pre-test, Post-test 1, Post-test 2, and Post-test 3 for experimental group are different. It is observed from the table above that, Pre-test scores are least and by the end of Post-test 3 the mean scores were gradually increased. Hence, the Friedman test showed that there was statistically significant difference between the tests– Pre-test, Post-test 1, Post-test 2, and Post-test 3 for memory with χ^2 (3) = 36.809, p<0.01.

Table 3

Comparison within variables (Pre-Post1-Post2-Post3) for Memory domain in Control Group (n=40).

Variables	Test	Mean	Median	SD	Chi square (3)	p value
Memory	Pre	27.38	25.50	7.20	22.674	0.000**
	Post 1	27.13	26.00	6.66		
	Post 2	27.50	28.00	7.15		
	Post 3	24.13	24.50	7.66		

* Indicates significant at P< 0.05 ** Indicates significant at P<0.01

From the above Table 3, one can observe that the mean scores of memory, for all tests– Pre-test, Post-test 1, Post-test 2, and Post-test 3 for control group are different. It is observed from the table above that, Pre-test scores are least and there was no increase in the means scores of Post-test 3. Hence, the Friedman test showed that there was no statistically significant difference between the tests–

Pre-test, Post-test 1, Post-test 2, and Post-test 3 for memory with χ^2 (3) = 22.674, $p<0.01$.

The results of the study demonstrated that Preksha Meditation had significant effects on memory among older women. Specifically, the mean memory scores were found to be significantly higher in the experimental group who practiced Preksha Meditation for 90 days, as compared to the control group who did not participate in the meditation intervention. The difference in the memory scores between the two groups was statistically significant, with a P-value less than 0.01. This indicates that Preksha Meditation has potential benefits in improving memory function among the elderly, supporting the study's hypothesis that Preksha Meditation would significantly affect memory in the experimental group.

Discussion

The findings from the study discuss the beneficial effects of yoga and meditation, particularly Preksha Meditation, on the cognitive function, specifically memory, amongst elderly women. These findings are in line with their initial hypothesis, as they predicted that Preksha Meditation would indeed have a significant positive impact on memory function. These findings are consistent with and supported by several other empirical studies in the literature. For example, studies by PS, *et al.*, 2020; Vaezi, *et al.,* 2020; Derayat, *et al.*, 2022 have also cited beneficial effects of yoga and meditation practices on cognitive functions in the elderly. The concept of neuroplasticity, which refers to the brain's ability to form and reorganize synaptic connections, particularly in response to learning or experience, could underlie this observed improvement in cognitive functions. Engaging in activities like meditation and yoga is believed to stimulate synaptic activities and promote brain health, thereby improving cognitive function. According to the psycho-biological theory, the practice of these activities can evoke a relaxation response marked by changes in metabolism, heart rate, respiration, blood pressure, and brain chemistry, contributing to improved cognitive health amongst the elderly. Furthermore, consistent with socioemotional selectivity theory,

older adults might improve emotional regulation and cognition by focusing on positive emotions from these activities. However, it should be noted that while these results demonstrate correlations, they do not conclusively establish causation. Further controlled clinical trials and longitudinal studies would be required to identify whether these links are causal and, if so, the processes driving these relationships.

Results supported the hypothesis by showing statistically significant improvements in memory among the meditation group compared to the control. This implies that the concentrated and careful perception practiced in Preksha Meditation may enhance neural plasticity associated with memory, aligning with theories that suggest meditation can improve cognitive function by promoting neural growth (Deepeshwar, *et al.,* 2015). As for how it works, while the study did not delve into the biological mechanisms, other scientific literature suggest that regular meditation can influence brain structure and function (Kambolis, 2017; Church, *et al.,* 2022). For instance, it may increase grey matter density in memory-related areas, enhance synaptic connectivity, and promote neurogenesis and plasticity (Berk, *et al.,* 2018). Thus, the practice of Preksha Meditation might stimulate these physiological changes, leading to improvements in memory. The specific mechanisms through which Preksha Meditation improves memory remains a fascinating area of future research. However, the present study adds to the growing body of empirical evidence advocating meditation as a beneficial practice for cognitive health in ageing populations.

Conclusion

Ageing is associated with multiple physical, mental, social, and economic problems, whereas cognitive health or brain health problems are more prevalent during old age. Attention should be directed to this age group. As it has been observed, most research in exercise, physical activity, meditation, mental enhancement training, yoga-based intervention, and memory in older adults has shown positive effects. In the current study, Preksha Meditation had a positive effect on improving the memory of the elderly. Meditation and yoga offer

significant advantages for enhancing positive cognitive health in the elderly. It is cost-effective, non-invasive, has minimal risk of adverse effects or drug interactions, and does not require medical supervision for practice. Therefore, it can be a good idea that the elderly, as a group at daycare centres, old age homes, or even at home individually, do these practices as one of the non-pharmacological psychological approaches, along with other methods, to improve cognitive health.

Acknowledgment: The authors appreciate and express their gratitude to all those who took the initiative to participate in the present study and helped to facilitate this study.

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Indian Journal of Gerontology
2023, Vol. 37, No. 4, pp. 520-529
ISSN : 0971-4189, UGC No. – List B, Science –121

Effect of Living Arrangement on Life Satisfaction in Elderly

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ABSTRACT

The objective of the present study was to examine the effect of living arrangements on the life satisfaction of 50 elderly, both males and females, ages varying from 60 years to 92 years, who were selected for the study by purposive sampling method. A life satisfaction scale (LSS-OH, Ojha, 2005) was administered to assess life satisfaction. Results indicated the significant effect of living arrangements and gender on the life satisfaction of the elderly. The result also revealed that older adults living only with a spouse especially and also with children both experience higher levels of life satisfaction than elderly people who live alone

Keywords : Living arrangement, Life satisfaction, Elderly

Living arrangement of a person normally species with whom the person resides. For elderly people, it can be alone, with a spouse, with their children, with spouse and children, or with others (IIPS, 2020). Living arrangements significantly affect older adults' emotional, financial, and physical health.India has been predominantly a collectivistic culture since ancient times, where the majority of older

adults live with their immediate family members and they have better health and well-being compared to those who live without their family (Rajan & Kumar, 2003; Agarwal, 2012; Srivastava & Muhammad, 2012; Samanta, *et al.*, 2015; Goli, *et al.*, 2019). The essential aspect of living with family members is that families provide financial, personal care, emotional support, and help with day-to-day activities which significantly influences life satisfaction.

In India, children live with their parents and it is their duty to provide support to the elderly and this tradition is being followed generation after generation. Now India is going through enormous socio-economic and demographic changes. In the last few decades, India has experienced a rise in economic growth, literacy level, urbanisation, and modernisation. According to the Longitudinal Ageing Study of India (LASI), 41percent of older adults aged 60 or above live with their spouses and children. More than a quarter of the older adults live with their children without the spouse and around 6 per cent of older adults lives alone (IIPS, 2020). Elderly people experience a change in their living arrangements due to children's migration for education or employment, the marriage of their children, the death of the spouse or children, and family conflict. When people face changes in living arrangements in later life, they experience low subjective well-being and this indicates a need for developing an appropriate home environment for older adults where they can live the rest of their life in happiness.

Life Satisfaction

Life satisfaction is an important part of ageing and is considered the best indicator of the quality of life. Life satisfaction is a subjective concept that involves the evaluation of the quality of an individual's life. Life satisfaction is an overall assessment of feelings and attitudes about one's life at a particular point in time ranging from negative to positive. Life satisfaction constitutes the cognitive dimension of subjective well-being and refers to individuals' global evaluation of their own lives. Life satisfaction is an important component of Subjective well-being (Diener, 1984). A higher level of life satisfaction

is associated with better physical health (Strine, *et al.,* 2008), happiness and improved psychological well-being, mood stability, positive thoughts, optimism, and a clear purpose in life, feeling less lonely and helpless and reduced risk of mortality (Boehm, *et al.,* 2015)

Living Arrangement and Life Satisfaction of Elderly

Transition in living arrangements is an important factor in determining life satisfaction (Sun & Zimmer, 2022). Kooshiar, *et al.,* (2012) reported that living arrangements directly or indirectly are a contributing factor to the life satisfaction of older people. Older adults living with a spouse and their children experience better health and it diminishes when they start living only with their spouse (Samanta, *et. al.*, 2015). Change made in living arrangements at the last phase of life is associated with low subjective well-being (Srivastava & Muhammad, 2021). The study also reported that when older adults change their living arrangements, 65 per cent are more likely to report low subjective well-being than those who did not experience any changes in living arrangements. Yamada and Arai (2015) examine the relationship between living arrangements and the psychological well-being of elderly people and found that older adults who live together with people of several generations scored significantly high in psychological well-being. Hwang and Sim, (2021) reported a significant difference in the happiness index among older adults who are living only with a spouse, older adults living alone, and those who are living with family. The study also revealed that older adults who live alone experience greater happiness when the frequency of contact with their family increases.

Since, Life satisfaction is an important component of subjective well-being and sustainable developmental goals. "Ensuring healthy lives and promoting well-being for all at all ages" is one of the ten key messages of UNDEASA/ PD, (2020). Life satisfaction of the elderly needs to be explored especially when the demographic transition is causing a huge increase in the elderly population and socio-economic transition is affecting the living arrangement of older adults.

Thus, the objective of the present study is to explore how living arrangement affects life satisfaction in older adults.

Method

Sample

The study was conducted on 50 elderly people aged 60 years and above (32 male, average age 69.4 years, and 18 female, average age 68.22 years). Their age ranged from 60 to 92 years with an average age of 68.98 years. Samples were selected from the urban area of Kolkata and the rural area of Paschim Medinipur using a purposive sampling method. Out of 50 elderly, 20 older adults were living with their children, 20 were living without their children and 10 were living without their children but with other family members. For older adults living without their children,10 data were collected from an old age home in Kolkata.

The tool used

The life satisfaction scale (LSS-OH) developed by Ojha (2005) was used to assess the life satisfaction of elderly people. The scale consists of 20 items, out of which 12 items indicate satisfaction with life and 8 items indicate dissatisfaction with life. The responses are scored on a 5-point scale, including options like strongly agree, agree, undecided, disagree, and strongly disagree.

Procedure

The participants were approached individually, and their consent was taken before collecting the data, and demographic details were recorded. Then the following instructions were given to the participants in Bengali.

> *On the following pages 20 statements related to lifestyle are given. Read each statement carefully and mark your answer out of the given five options such as strongly agree, agree, unsure, disagree and strongly disagree, whichever is closest to your opinion. Please answer all 20 statements. Your answer will be kept completely confidential.*

After giving the above instructions, a Bengali translation of the Life Satisfaction Scale was given to them. When they responded to all the items, they were thanked for their time and cooperation.

Result

The demographic data obtained from the respondent is presented in Table 1. It shows that 64 per cent of the total samples are men and 36 per cent of the total population is female. The percentage of older adults living with grandchildren is 42 per cent and the percentage of elderly people living without grandchildren is 58 per cent. Married older adults represent 60% of the total sample whereas unmarried older adults and single, who are either divorced or widowed or widower represent 12 per cent and 28 per cent of the total sample respectively. Out of the total population, 32 per cent of people live in rural areas and 68 per cent of elderly people live in urban areas. People living in a joint family represent 60 per cent of the total population and people living in a nuclear family represent 40 per cent of the total population.

Table 1

Demographic data of Respondent

Demographics		**N**	**Percentage**	**Mean Age**
Total		50		68.98 years
Gender	Male	32	64%	69.4 years
	Female	18	36%	68.22 years
Grandchildren	Yes	21	42%	
	No	29	58%	
Marital Status	Married	30	60%	
	Unmarried	6	12%	
	Single	14	28%	
Family type	Joint	30	60%	
	Nuclear	20	40%	
Living area	Rural	16	32%	
	Urban	34	68%	

The result on life satisfaction indicates that the mean of participants living with their children is 63.5 (SD=10.47) and the mean of older adults living without their children is 58.65 (SD=9.01). For participants who are living without children but with other family members, the mean is 67.7 (SD=5.74). All three groups indicated above-average life satisfaction. This result is graphically presented in Figure 1.

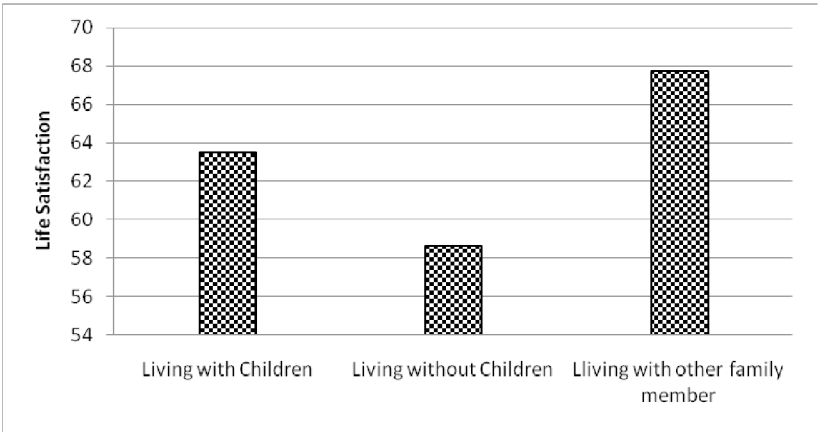

Figure 1 : *Life satisfaction as a function of living arrangements*

To evaluate the effect of living arrangements on life satisfaction, one-way ANOVA was calculated. The result showed that the effect of living arrangements on life satisfaction ($F(2,47) = 3.22$) was significant at 0.045 level. Further, Post Hoc (Tuckey) test was carried out to determine where the differences truly come from. Findings from the Tuckey test showed significant differences between older adults living without children and older adults living without children but with other family members (mean difference = 9.05) at 0.04 level.

Results on life satisfaction as a function of gender show that the mean of male participants was 64.84 (SD=9.52) indicating a higher level of satisfaction than female participants, 58.06 (SD=9.05). The difference between the level of satisfaction of males and females was ($t = 2.46$) significant at 0.05 level. This result is graphically presented in Figure 2.

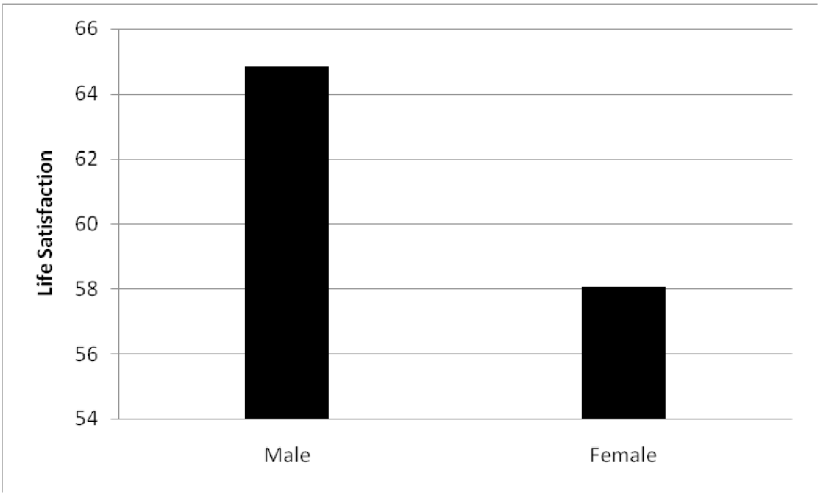

Figure 2 : Life satisfaction as a function of gender

Discussion

The present study was an attempt to evaluate the effect of living arrangements on life satisfaction in older adults. Despite of being a young country, India is experiencing a rapid growth rate in its geriatric population. An aging population is always a subject of challenge across the globe, particularly in developed economies such as India. Changes in demographics have brought a huge change in living arrangements which directly affect the elderly people of this country. Since life satisfaction is a crucial component of well-being and ensuring healthy lives and promoting well-being for all at all ages is one of the sustainable development goals, it is important to how living arrangement affects the life satisfaction of the elderly.

The obtained result on the Life Satisfaction Scale indicates that all three groups scored above average on the life satisfaction scale. The result further shows that people living without children but with other family members showed the highest level of satisfaction (M=67.7) followed by older adults living with children (M=63.5) while elderly living without children showed the lowest level of satisfaction (M=58.65) among the three groups. The difference between the mean

values of the three groups on life satisfaction was significant. This finding gets support from the study conducted by Kooshiar, *et al.,* (2012). They reported that different types of living arrangements are an important factor for predicting life satisfaction in elderly people. The result shows that older adults living only with a spouse especially and also with children both experience higher levels of life satisfaction than elderly people who live alone.

Kandapan, *et al.,* (2023) revealed that the life satisfaction of Indian older adults is significantly associated with their living arrangements. Older adults co -residing with a spouse and specifically along with a child experience higher life satisfaction and elderly people living alone have a lower level of life satisfaction. They suggested that the life satisfaction of older adults could be facilitated through interventions that consider their living arrangements. Thus, the hypothesis i.e. "*Living arrangement of the elderly will significantly affect their life satisfaction*" is proved to be correct.

Results also show a significant effect of gender on the life satisfaction of the elderly. Male participants showed higher life satisfaction (M=64.84) than their female counterparts (M=58.06). This finding is supported by a study conducted by Inglehart, (2002). According to the study, younger women (e.g., 18-44) have higher levels of life satisfaction than younger men but in the case of older people, older women (e.g., 44-65+) had lower levels of life satisfaction than older men. Thus, gender of the elderly people affects their life satisfaction.

Conclusion

Life satisfaction is the key to subjective well-being and healthy ageing.The findings of the present study showed a significant effect of living arrangements on the life satisfaction of the elderly. This indicates that there is a need to develop an appropriate home environment for older adults where they can live the rest of their lives in happiness.

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Indian Journal of Gerontology
2023, Vol. 37, No. 4, pp. 530-547
ISSN : 0971-4189, UGC No. – List B, Science –121

Parkinson's Disease (PD) Literacy : A Pilot Study on Awareness about PD among the General Public in Mumbai

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ABSTRACT

The objective of this exploratory survey was to find out the level of awareness about Parkinson's disease among the 688 respondents (Males=267, and Females= 421) of different ages (from 14 years to 93 years), and education levels residing in Mumbai (Maharashtra). A questionnaire was administered to all the participants individually. The findings revealed that knowledge gaps are present, especially about cell degeneration, who can be affected, and symptom presentation. However, although recognizing PD is a serious disease, the perception and attitudes toward PD are largely positive. Results have implications for designing health literacy and stigma reduction programs in the community.

Keywords: Awareness, Health Literacy, Parkinson's Disease, Knowledge, Attitude, Stigma

Parkinson's Disease (PD) is a progressive neurological condition caused due to damage to neuron cells in the brain, that results in various physical, psychological, and cognitive symptoms like slow

movement, tremors, rigidity, imbalance, anxiety, depression, sleep issues, and other sensory disturbances (Khan, *et al.,* 2019). PD impacts the quality of life of people with Parkinson's (PwPs) and their caregivers due to caregiving activities, socio-economic burden, and decrease in social interactions (Schrag, *et al.,* 2001, Martinez-Martin, *et al.,* 2011;). World Health Organization (WHO 2022) estimates showed that in 2019, over 8.5 million individuals have PD worldwide.The prevalence of PD in India is less compared to other countries, but the total burden of PD is much higher as a result of the large population (Singhal, *et al.,*2003). Considering the increasing prevalence and impact of PD worldwide, health literacy about Parkinson's Disease is essential for early diagnosis. Research suggests that speed of diagnosis is a critical determinant of illness burden and symptoms management, patient outcomes, and quality of life (Grosset, *et al.,* 2007; Grosset and Schapira, 2008). Greater awareness about PD results in reducing stigma around PD symptoms, which then promotes actions to seek better health and timely treatments (Pan, S., *et al.,*2014; Schiess, *et al.,* 2022). Awareness may lead to better motivation and interest in fundraising efforts toward research, and holistic treatment and care.

Health Literacy has been defined as "the ability to obtain and understand health information in order to make informed decisions regarding health care and wellness and is a prerequisite for comprehension of any health condition" (Ratzan and Parkar, 2000). Despite the increasing prevalence of Parkinson's Disease in India and worldwide, survey studies studying the knowledge of PD in specific regional groups or in diverse groups of elderly patients, or with the PwPs (persons with Parkinson's) and caregivers, have found a low level of knowledge about PD among those surveyed (Jitkritsadakul, *et al.,*2017; Turgunkhujaev, *et al.,* 2018). In 2009, a survey by the European Parkinson's Disease Association (EPDA) found that only 44 percent of the population recognized PD as a degenerative movement disorder and that only one-third of those surveyed knew how widespread PD is. In South Korea, a survey revealed that youth

exhibited the least knowledge about PD, and lower socioeconomic status and education levels were associated with lower awareness and poor knowledge and misconceptions about PD (Youn, *et al.,* 2017). Some studies suggest that younger adults may be more aware of PD but there could be variation in their awareness levels (Chow and Viehweger, 2018; Anpalagan, *et al.,* 2019). A study in Turkey showed the necessity to increase the knowledge of PD among caregivers and the public (Gultekin, 2017).

An analysis of studies on knowledge and awareness about PD in different countries in Asia reveals that tremor is the most recognized motor symptom of PD whereas non-motor symptoms are under recognized (Tan, *et al.,* 2015; Youn, *et al.,* 2017). Yadav, *et al.,* (2012) found adequate knowledge among their sample of PD patients and caregivers about symptoms and treatments while another study by Prasad, *et al.,* (2021) showed that education about DBS was very low in a single care Hospital. Tripathi, *et al.,* (2017) found that there was no awareness of all symptoms and alternative therapeutic options and low awareness about disease impairments (32%), long-term complications (28%), dosing regimen (46%), and follow-up (36%) in 100 patients with Parkinson's disease (PD) in Mumbai. Singhal, *et al.,* (2003) reported that lack of awareness, limitation of human resources, and cost factors deny the benefits of therapy to many patients. Innovative community outreach programs need to be designed for creating awareness, and facilitate early screening and treatment of PD (Kadakol, *et al.,* 2012; Navrata- Sanchez, *et al.,* 2023).

The review indicates that there is a need to understand the level of awareness about PD in India to increase knowledge and promote a positive attitude toward PD.

Methodology

The objective of this exploratory survey (conducted from August 2019 to February 2020)was to find out the level of awareness about Parkinson's diseaseamong the 688 respondents

(Males=267, and Females= 421) of different ages (from 14 years to 93 years), and education levels residing in Mumbai (Maharashtra). Initially, 1071 persons were contacted but only those persons were approached who had some information about PD.People suffering from Parkinson's disease and their caregivers were excluded from the study.The participants were informed about the purpose of the study and their prior consent was obtained to participate in the study.

A questionnaire was prepared based on several studies and the experience of senior physiotherapists who have been in the field for more than 10 years. It was designed to assess the respondent's knowledge and attitudes toward PD (Pan, *et al.*, 2014; Chow and Viehweger, 2018; Barve, 2019).The questionnaire was divided into informed consent, demographic information, and main questions. Basic demographic data such as gender, age, occupation, and educational level were collected. The main questions consisted of open-ended questions regarding knowledge like 'The cause of Parkinson's Disease is...,'' People get Parkinson's due to....'

Thirty youth volunteers were involved in data collection for this research. The youth volunteers were from various colleges in Mumbai, pursuing the final year of an undergraduate course in psychology. They were trained in how to use the questionnaire to collect data by the two experienced staff in the organization. While one of the staff was head of physiotherapy, the other was a senior psychologist. The trainers have been in the field of disability and the cause of Parkinson's Disease for more than twenty years. Data were collected both online (through google forms in email and WhatsApp platforms) as well as in person mode.

The awareness for PD was evaluated using frequency, percentages, and chi-squares for quantitative questions. Chi squares were also performed to evaluate the effect of demographic variables on some social and attitude questions. Test of Goodness of fit and test of independence was used.

Results

The participants' knowledge and attitudes about PD

Table 1

Frequency, percentage, and goodness of fit of response for people who have awareness of Parkinson's disease

Question	Response categories (N, %)	X^2
Q1. Are you aware of PD?	Yes (688, 64.24%) No (383, 35.76%)	*(1, N=1071) = 86.858, P<.05*
Q2. If yes, then how?	Information through reading in various subjects (66, 9.59%) Contact with PwPs (92, 13.37%) Information through parents/ family/friends/others (158, 22.97%) Information through media (social, print) (214, 31.1%) No idea of the source (158, 22.97%)	(4, N=688) = 100.84, *P*<.05
Q 3. Cell degeneration occurs in the___ in Parkinson's?	Correct (338, 49.13%) Incorrect (350, 50.87%)	(1, N = 688) = .209, *P* < .05
Q 4. Parkinson's is only seen in the elderly	Yes (273, 39.68%) No (260, 37.8%) I don't know (155, 22.52%)	(2, N = 688) = 36.51, *P* < .05
Q 6. Cause of Parkinson's is....	Known (130, 18.9%) Unknown (223, 32.41%) I don't know (335, 48.69%)	(2, N=688) = 91.9, *P* < .05
Q 7. Parkinsons is Contagious	Yes (55, 7.99%) No (529, 76.89%) I don't know (104, 15.12%)	(2, N = 688) = 592.608, *P* < .05
Q 8. Tremors is present in all people with Parkinson's?	Yes (236, 58.47%) No (84, 20.74%) I don't know (85, 20.99%)	(2, N = 688) = 113.348, *P* < .05
Q 9. There is a blood test that can diagnose Parkinson's?	Yes (85, 12.35%) No (227, 32.99%) I don't know (376, 54.66%)	(2, N = 688) = 184.67, *P* < .05

Q10. How serious is Parkinson's disease?	Mild (17, 2.47%) Moderate (201, 29.21%) V.severe (306, 44.48%) I don't know (164, 23.84%)	(3, N = 688) = 249.337, $P < .05$
Q11. Is there a stigma associated with Parkinson's? If yes what?	Yes (124, 18.03%) No (204, 29.65%) I don't know (360, 52.32%)	(2, N = 688) = 125.637, $P < .05$
Q12. If you had Parkinson's would you tell people? If yes who?	Yes (448, 65.12%) No (96, 13.95%) I don't know (144, 20.93%)	(2, N = 688) = 317.744, $P < .05$
Q13. Can a person with Parkinson's Disease work?	Yes (386, 56.11%) No (98, 14.24%) I don't know (204, 29.65%)	(2, N=688) = 185.019, $P < .05$

Gender and age differences in knowledge and attitudes toward PD respectively

Table 2

Gender differences in responses of people with awareness about Parkinson's Disease

Question	**Overall sample N (% in the total sample) N = 688**	**Male (% in category) N = 267**	**Female (%in category) N = 421**	**Chi-square test of independence**
Q11. How serious is PD?				
Mild	18 (2.61)	10 (3.74)	8 (1.9)	(3, N = 688) = 249.337, n.s
Moderate	202 (29.36)	84 (31.46)	118 (28.03)	
Severe	304 (44.19)	103 (38.58)	201 (47.74)	
I don't know	164 (23.84)	70 (26.22)	94 (22.33)	
Q13. Is there a stigma associated with Parkinson's? If yes what?				
Yes	124 (18.02)	40 (14.98)	84 (19.95)	(2, N = 688) = 3.223, n.s
No	204 (29.65)	86 (32.21)	118 (28.03)	
I don't Know	360 (52.33)	141 (52.81)	219 (52.02)	

Q14. If you had Parkinson's would you tell people? If yes who?				
Yes	448 (65.12)	167 (62.54)	281 (66.74)	(2, N = 688) = 8.5789, $P < .05$
No	96 (13.95)	50 (18.73)	46 (10.93)	
I don't know	144 (20.93)	50 (18.73)	94 (22.33)	
Q15. Can a person with Parkinson's Disease work?				
Yes	387 (56.25)	154 (57.68)	233 (55.35)	(2, N = 688) = .4547, n.s
No	98 (14.24)	38 (14.23)	60 (14.25)	
I don't know	203 (29.51)	75 (28.09)	128 (30.4)	

1. *n.s= Not Significant

Table 3

Age differences in responses of people with awareness about Parkinson's disease

Question	Overall sample N (% in the total sample)	14-17 yrs. Teenagers	18-30Yrs. Young adults	31-45 yrs. Middle-aged	46-60 yrs. Older Adults	60 yrs+ Senior Citizens	Chi-square test of independence
Q11. How serious is PD?							
Mild	23 (3.34)	1 (7.14)	5 (1.2)	8 (7.41)	4 (3.88)	5 (10.87)	(12, N= 688) = 41.724, $P < .05$
Moderate	201 (29.22)	3 (21.43)	112 (26.86)	40 (37.03)	24 (23.3)	22 (47.83)	
Severe	300 (43.60)	8 (57.14)	186 (44.6)	42 (38.89)	52 (50.49)	12 (26.09)	
I don't know	164 (23.84)	2 (14.29)	114 (27.34)	18 (16.67)	23 (22.33)	7 (15.21)	
Q13. Is there a stigma associated with Parkinson's? If yes what?							
Yes	124 (18.02)	2 (14.29)	80 (19.19)	16 (14.81)	15 (14.56)	11 (23.91)	(8, N = 688) = 47.415, $P < .05$
No	20 4 (29.65)	4 (28.57)	87 (20.86)	42 (38.89)	51 (49.52)	20 (43.48)	
I Don't Know	360 (52.33)	8 (57.14)	250 (59.95)	50 (46.3)	37 (35.92)	15 (32.61)	

Q14. If you had Parkinson's would you tell people? If yes who?							
Yes	448 (65.12)	9 (64.29)	265 (63.55)	69 (63.89)	70 (67.96)	35 (76.09)	(8, N = 688) = 16.903, $P < .05$
No	96 (13.95)	3 (21.42)	51 (12.23)	19 (17.59)	13 (12.62)	10 (21.74)	
I don't know	144 (20.93)	2 (14.29)	101 (24.22)	20 (18.52)	20 (19.42)	1 (2.17)	
Q15. Can a person with Parkinson's Disease work?							
Yes	391 (56.83)	7 (50)	225 (53.96)	63 (58.33)	62 (60.19)	34 (73.91)	(8, N = 688) = 23.646, $P < .05$
No	98 (14.25)	3 (21.43)	48 (11.51)	19 (17.6)	20 (19.42)	8 (17.39)	
I don't know	199 (28.92)	4 (28.57)	144 (34.53)	26 (24.07)	21 (20.39)	4 (8.7)	

Discussion

Health Literacy is essential for better health of society. Low health literacy is associated with failure to seek timely medical help, excessive use of emergency services, low knowledge of treatments and medications, poorer self-management and higher hospitalization rates, higher mortality among older adults, and increased caregiver burden (Fleisher, *et al.,* 2016;Lee,*et al.*,2019; Mohiuddin, 2023). Thus, appropriate and adequate information needs to be disseminated through awareness programmes to develop sensitivity and awareness about the disease. Awareness about various aspects of PD is dependent on knowledge, attitudes, and perception of the disease.

Awareness levels

In this study, there was a significant difference in awareness levels about PD, with more respondents being aware than not aware. In modes of awareness, media was the most popular source followed by information gained from familiar people. Results indicated that there was a significant difference between the responses in terms of gender, age, education, and occupation. Several trends can be found through percentage differences. Women were seen as being more aware about PD than men. The percentage difference between aware and not aware women was greater compared to the percentage difference in men who are aware or not aware. Among young adults, there were more individuals aware than not aware, but among teenagers, middle-aged individuals, and older adults, there are more not aware than aware; among the elderly, there wasn't a high difference. A study reported 54 percent of young adults in London and Canada, were knowledgeable about the disease, as also has been seen in this study (Chow andViehweger, 2018). Interestingly, more of those with a post-graduation degree or professional course were unaware rather than aware, whereas more were aware than unaware amongst relatively less educated individuals, and the widest percentage difference was the difference in undergraduate students. This suggests

that contrary to conventional belief, higher education may not translate to greater awareness about PD. While students and professionals showed higher awareness than non-aware status, amongst homemakers, the difference was negligible.

Accuracy of knowledge about PD

In addition to the presence of awareness, the quality of knowledge shown by people varied, with some accurate beliefs and some misconceptions. A trend seen in responses is that many have answered 'I don't know' showing a lack of information about the details of the disease. In some other specific questions, mixed results are seen about the accuracy of knowledge.

Related to the onset of disease, a number of people incorrectly believed that it's seen in the elderly only was equal to those who believed that it's not seen only in the elderly. There 22.52 percent did not know the answer.

Most people incorrectly believed that tremors are present in all PwPs. However, this is a myth and needs to be addressed in educational programs about PD. A few people reported slowness of movement, balance issues, walking difficulties, and rigidity. Very few people know about postural difficulties and dyskinesia. Awareness about non-motor symptoms was very low. Memory loss, speech difficulties, and pain were reported by a few while depression, anxiety, fatigue, sleep disturbances, and constipation were hardly reported. Since knowledge about cognitive and psychological symptoms except memory loss in Parkinson's is low for many in this study, it could be possible that most respondents did not believe that PwPs have any PD-related psychiatric symptoms. Throughout other studies as well, it has been found that non-motor symptoms of PD have been under-recognized (Tan,*et al.*, 2015; Alyamani, 2018). Respondents also showed incorrect beliefs about where the cell degeneration occurs in PD, with most believing that it occurs in spines, bones, or muscles.

For the cause of PD, 69 percent thought that occurred due to no reason at all. The rest of the sample has cited heredity, karma, type of personality, and a combination of these as the cause.

Regarding the treatment, 5.86 percent believe that it can be treated by medicines only and 4.97 percent said exercise only but the majority (63.39%) believe that both medicines and exercise are necessary for treatment. This is encouraging as it shows that programs of exercises in individual or support group formats will potentially be supported by the respondents. However, 15.29percent of respondents believed only in other treatments like homeopathy, Ayurveda, Yoga, Naturopathy, etc. It shows that many Indians believe in traditional treatment methods (Pandit, *et al.*, 2018). There were 10.49percent who said that surgery was also an option.

Attitudes towards PD and stigma

Considering the questions for understanding attitudes towards PD, the trends indicate through percentage differences that most people considered it to be very serious followed by those who felt it was moderately serious. Previous studies have cited that there is a stigma for PD as the patients may be viewed as weak and dependent or that PD is contagious (Fothergill- Misbah, 2023). Knowledge about PD reduces negative attitudes (Schiess,*et al.*, 2022). In this study, basic knowledge was present in those who were aware of the disease, but the understanding and details of symptoms were lacking, hence the perception of the seriousness of PD in the sample is that it is a moderate to severe disease. There were 56 percent who reported that they don't know if any stigma is attached to the disease but 29.5 percent said that they felt no stigma is attached.

Given the lack of understanding of the details about the disease, it is surprising that 56.11percent believe that PwPs can work but 29.64percent are also unaware of the capacity of the PwPs to work and 14.24 percent believe they cannot work. These results indicate that though there are positive responses, many have reservations about the capacity of PwPs to work or hold a job.

The majority of the respondents reported that they would disclose to others if they had PD but they would tell only close family and medical professionals. Among them, 25 percent said they will only disclose it to immediate family. There are 70.9percentwho have said that they will see the doctor immediately while 16.86percentfeel they will wait till the symptoms start interfering with daily work before approaching the doctor.

Results indicate fairly accepting attitudes towards the disease. Data indicate that there were no gender differences in perception of stigma, how serious PD can be, and whether people with PD can work. Gender differences were only seen in people's willingness to disclose the disease to others, with women being more willing than men to disclose. However, age had an impact on all these. Trends suggest that except for the elderly, for all the other age groups, the greatest number of people believed that PD is a very serious threat. Most elderly rate it as a moderate threat. Younger people (teenagers, young adults, middle adults) showed a stronger tendency towards 'don't know' responses to the question about stigma while older people (older adults, elderly) have been more emphatic in their 'no stigma' responses. It could be possible that the young adults are still in the process of exploring the information and their own perceptions about many life aspects, and hence may show ambivalence.

Challenges

This study presented some challenges. The wording of the questionnaire was reviewed repeatedly so that they don't influence the direction of the response like the question 'How serious is PD?' was reviewed and initial consideration of words like threat and severe were discarded and the word 'serious' was chosen. The sample for the study was also not random as the volunteers approached people they knew resulting in snowball sampling. The respondents were primarily young adults as the volunteers themselves were students and

could approach other students for the survey. Respondents were primarily urban. A larger survey with a more heterogeneous sample done across other locations and with a diverse age group would yield richer results.

Conclusion

Overall trends suggest that knowledge gaps are present, especially about cell degeneration, who can be affected, and symptom presentation. However, although recognizing PD is a serious disease, the perception and attitudes toward PD are largely positive. Results have implications for designing health literacy and stigma reduction programs in the community. In addition, this is the first awareness survey conducted by a group of volunteers. Involving the youth in programs and studies for Parkinson'sdisease is a positive step towards sensitization towards the disease, increasing knowledge, and changing attitudes towards the patients with Parkinson's disease.

Acknowledgment: The authors would like to acknowledge Psychiatric Consultancy for their advice, suggestions, and guidance for this study. We would also like to acknowledge the volunteers who helped in data collection and compilation.

*This survey was conducted by an organization in Mumbai that works with people suffering fromParkinson's Disease and their families to provide rehabilitative services in a support group format aiming to improve the quality of life through the multidisciplinary approach of rehabilitation and psychoeducation and spread awareness.

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Indian Journal of Gerontology
2023, Vol. 37, No. 4, pp. 548-561
ISSN : 0971-4189, UGC No. – List B, Science –121

Caring for the Elderly : An Analysis of the Dynamics of Kin Networks in the Wake of Male Migration

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ABSTRACT

The paper studied the consequences of male migration on 150 elderly people, 60 years and above, who were left behind and the role that kin networks played in helping them cope with the prolonged absence of their sons. They were interviewed individually. The findings revealed that the long absence deprived the elderly of the presence of their children. Support from children is one of the social support categories that greatly influence elderly people. Even if they have access to a variety of support systems when they are in need of it, the importance of their kin networks is noteworthy.

Keywords: Elderly, Support Mechanism, Kin Network, Migration.

Migration from Kerala, the southernmost state of India, is not a recent phenomenon. Though the state witnessed various streams of migration, movement on a massive scale started during the 1960s due to the oil boom in the Gulf countries. Then, Arab Countries in

the Middle East Region became a paradise for the migrants of Kerala by contributing not less than fifty percent of the total annual migrant flows from India to the Arab region (Joseph, 2006). The majority of migrants to the Middle East were male laborers in manual or construction-related industries who were employed on a temporary basis. Contract labour was strictly recruited for employment in the Gulf in the expectation that they would return home at the end of the contract period. With the exception of the Gulf Crisis in the early 1990s, migration studies carried out in Kerala indicate that there has been a constant increase in migration from Kerala to Middle Eastern countries. Empirical studies show that a significant number of families in Kerala have been impacted by male migration to Middle East countries in various ways (Gulati,1993; Kurien, 2002). In most cases, families that are successful in sending a single male member to the Middle East have the ability to send other members too. It is seen as the initial emigrant from the family helped others to follow suit and as a result of it, in many families, there is more than one migrant member. The migration of one household member appears to have an impact on other family members too; though the range of such impact varies across individuals and families. Migration from Kerala worked more in favour of men than women, since more than 80 percent of the migrants from Kerala are men (Kannan, 2005).

Migration has been described as a multifaceted process. When moving somewhere new, migrants frequently have their own objectives and ideas in mind (Cohen and Sirkeci, 2011). Concerns about how the absence of children in the home or community may impact the wellness of elderly people who are left behind have arisen as a result of the growing out-migration of young adults. As the group which often needs more care and support, the elderly in the family are affected by the prolonged absence of sons from the household. The family has traditionally served as the primary structure for caring for the elderly in much of the developing world, particularly in many Asian countries, where they typically live and work alongside their

children (Knodel, *et al.*, 1992). There is a pervasive societal expectation that younger generations, especially children, are in charge of looking out for their elderly parents' welfare. But the living arrangements of older parents are frequently impacted by the separation of adult children who move away from home in search of employment (Knodel, *et al.*, 2011). The Indian cultural norms also encouraged close connections between relatives in the care of the elderly and the co-residence of children. Elderly parents who live with their children are likely to receive prompt support and care in a variety of ways (Audinaryana, 1999). Therefore, it is significant to study the implications of male migration on parents who live in Kerala because migration physically separates parents from migrant children for a very long time. In light of the exodus of men to Middle Eastern nations, this paper analyses how the kin network supports the welfare of elderly parents living in Kerala.

Review of Literature

Some positive and negative changes were noticed in the relationship between the left behind family and close kin after male emigration. The relatives played a major role in supporting the emigrant families since the very beginning of the departure of emigrants, and it is an ongoing process (Gulati, 1993, Sekhar, 1997). Migration has an impact on the entire family as well as the different members of the family. The wife, the kids, the parents, and the siblings are the ones most likely to be substantially impacted (Arnold and Nasra: 1984). In many nations, including India, Sri Lanka, the Philippines, and Pakistan, the migration of male workers has led to a rise in joint family living arrangements and familial dependence. The kinship group and the extended family play a key role in the adjustment process due to the migration of family members (Stella, *et al.*, 1986).

Kurien (2002) conducted ethnographic research in Kerala to understand the migration pattern and migration-induced social changes. The study found some variations based on the religion of the respondents. In one of the studies in villages dominated by Muslim

population, migration has led to strengthening the joint family and solidarity and decreased the bond between husband and wife. However, in a different town where Syrian Christians predominate, migration has diminished the extended family, giving women more autonomy and the ability to extend their roles outside of the home. It has also improved the bond between spouses. Hoodfar (2003) noted that when they were close to one another, interactions between the family that was left behind and their own relatives were more intense. In the absence of the male migrant, they frequently formed tighter relationships and exchanged services far more readily with their mothers, sisters, and occasionally brothers.

Methodology

This paper is based on an empirical study conducted among 150 elderly parents who were 60 years or above, having sons working in Gulf countries from the three selected districts of Kerala state; India, namely, Thiruvananthapuram, Malappuram, and Kannur. Interview schedules with open-ended questions were used to interview the respondents.

Findings and Discussion

Several factors, including patterns of location, participation in the earning process, and source of family income, were analysed in this section to have a better understanding of the respondents' personal profiles and aging experiences. It is evident that a significant share (43.3%) of the elderly parents of the migrants lived with their wives and non-migrant children when housing patterns are taken into account. Another considerable percentage of the parents (36.7%) lived with the wife and the children of the sons who are migrants. More male respondents (58.2%) lived in the latter arrangement than females (41.8%). The remaining 4.7 per cent of elderly parents lived alone in their own homes, while 15.3 per cent shared a residence with their spouse. All of the single female residents were either widowed or divorced from their husbands. The nature of residence of the elderly left behind is shown in Table No. 1

Table 1

Nature of residence of the respondents by sex (in percent)

Household composition	Male	Female	Total
Living with spouse	21.3	9.3	15.3
Living with spouse and other sons/ daughters	18.7	21.3	20.0
Living with the family of the emigrant sons	42.7	30.7	36.7
Living with other offspring	17.3	29.3	23.3
Living alone	—	9.3	4.7
Total	100	100	100

The majority of the responders were over 60 years old and no longer in the workforce. However, 12.7 percent of them entered the workforce to support their personal and family needs. In such cases, the emigrant sons' or other grown children's financial contributions to the elderly parents are either nonexistent or insufficient for them to support themselves. This scenario compelled individuals to look for employment in certain traditional industries like fishing and coir labour or to engage in other tasks like beedi production and home chores in order to cover daily living expenditures. However, compared to other sources, remittances from emigrant sons (45.3%) continue to be the main source of family income for aging parents.

Managing the migration of sons'

Young male family members' extended absence causes specific alterations in the other family members. Male migration, according to Zachariah, *et al.*, (2000), deprives older parents of their sons' care at a time when they need assistance and care from others, particularly from children. The elderly parents' experiences following the emigration of the men are described in this section. The issues raised here included their perceptions of the love and concern of other family members, particularly from their grown children, as well as their access to appropriate healthcare facilities, the availability of financial resources

to meet their needs, the lack of physical assistance in their daily lives, and the lack of physical assistance.

Sonawat, (2001). observed that in such a circumstance, the absence of the younger adults of the family loses the support of the older generation, as a result of migration to other countries. The health requirements and issues that older people face are varied, and the majority of the elderly participants in this study had several medical conditions. The likelihood of disease and dependence frequently rises with age. More than 90 percent of the respondents reported having three to four chronic illnesses at once, including diabetes, hypertension, heart disease, asthma, bone difficulties, arthritis, and others. It is certain that their advancing years, poor health, and unstable finances contributed to their growing partial or whole dependence on their offspring. Very often they themselves have to encounter several hardships in everyday life, because the help from their children and others may be minimal (Audinaryana, 1999).

Migration improves the socio-economic conditions of the emigrant and his family and contributes to better nutrition and access to health care (Misra, 1998; Banerjee, *et al.,* 2002). However, some of the elderly parents' responses suggest the contrary; they stated that the migration of their sons prevented them from even having access to adequate healthcare and medical facilities. Markers of poor parental health, such as self-reported mental and physical health conditions and the presence of chronic health diseases, are correlated with the migrant status of adult children (Antman, 2010). It is also notable that more men than women expressed their displeasure with healthcare facilities' accessibility. In a similar vein, more than half (52%) of the respondents stated that their contributions still fall short of covering all of their financial needs even after their sons' emigration. One of the 65-year-old male respondents' narrations presents a vivid picture of the fears and anxiety he has been experiencing.

> *Both of his sons, who were fishermen before they immigrated, are currently employed in the Gulf. Even though two of the boys work in the Gulf countries, the family does not get any*

financial benefits from migration. However, the father is not interested in complaining about it because he is fully aware of the sons' financial situation, as well as their life and struggles in the Gulf. Their work is seasonal in nature. They only receive pay and employment for six months out of the year; the other six months are out of employment. They are unable to visit home during the offseason since their companies never cover their travel costs, and making the trip on their own dime increases their financial burden. They must perform additional jobs to cover those expenses, which forces them to stay there for the remaining six months. Both of them are not adiquately educated with proper schooling. So they are frequently limited to menial duties like loading. Due to their lack of experience in performing these tasks, they are unable to continue it for additional days. Very often they are left with less income which does not help them to take care of the expenses of their parents. The father will eventually need to work to support the family's expenses.

As described above, the emigrant sons in the majority of these cases have less education and work in the unskilled or semi-skilled sectors in the Gulf nations. They were frequently unable to make a major financial contribution to their parent's income due to their unfavorable working conditions and the highly seasonal nature of their employment. Concerns regarding whether the absence of children in the home or community impacts the health of elderly people who are left behind or their behaviour in seeking medical care have arisen due to the increasing out-migration of young adults.

Kin networks as a support mechanism

While historical and economic preconditions were significant for the Middle Eastern Migration, the functioning of social and familial networks that led to chain migration was mostly responsible for its expansion and concentration in a few regions of the state known as "Gulf pockets" (Kurien, 2002). The networks of migration in Kerala can be seen as a "chain" process, with individuals living abroad assisting

loved ones who are leaving by providing financial assistance, job placement assistance, and job visas through employers they know (Nair, 1998). The bulk of Keralites who migrated to the Middle East in the past were Muslim, young, rural, literate, and unskilled or semiskilled. Later, those from semi-urban and urban areas who have advanced degrees or professional and vocational abilities as well as those who practice other religions including Hinduism and Christianity also take part in the emigration process. In this study, 57.3 per cent of the respondents said that all of their sons were employed in Gulf nations, and the first migrant child or daughter encouraged their siblings to follow suit by providing both material and non-material support.

As previously mentioned, social and familial networks play a crucial part in the migration of Keralites to the Gulf. Migration causes the kin networks to strengthen and be reinforced (Gulati, 1993). Migration increases the interdependence among family members. So, family interdependence and kin networks can certainly be said to have increased as a result of migration. In most families, the kin networks served as a most essential resource for economic assistance and security in needy situations and carried the welfare of individual family members. These family or kin group transfers helped the family members to overcome the difficulties related to the long absence of migrants to some extent (Gulati, 1993; Harevan, 1994; Nair, 1986; Sekher, 1997).

In certain Gulf pockets of Kerala almost all of the males are migrants; so if there are no non-migrant children the condition of the parents is seen as worse due to the lack of timely and proper support. Apart from issues like inadequate health care facilities and financial resources, the problem of non-availability of persons to assist in their daily lives was reported by 66.7 percent of the respondents. Some of the elderly parents express the advantages of the support of married daughters during their son's absence. Daughters sometimes give extra care than sons (Stohr, 2015). As stated at the beginning of this analysis, 95.7 percent of the respondents in this study lived with at least one family member including their spouse, non-migrant sons/daughters,

and wives and children of the migrant sons. Such support mechanisms for the elderly have existed for many of them.

An increased likelihood of having poor mental health is frequently linked to having migrant children (Antman, 2010). Long-term child/son absence might cause a variety of psychological issues for the elderly. If an adult kid migrates, the emotional health of an old parent considerably declines. The most significant issues in this regard include worries about the emigrants, feelings of insecurity, and loneliness. Nearly all of the respondents stated that they worry for their son's future and health while they are working in Gulf nations. The time between two consecutive home visits by the migrants was often very considerable in the majority of the cases. Except for a few, almost all the parents kept in touch with their sons through a variety of electronic media such as telephone, mobile phone, and internet. Analysis of data shows that issues such as insecurity and anxiety over the emigrants were comparatively lower among those parents who had regular communications with migrant sons than those with irregular and intermittent communications.

Many migrants send home money, which could compensate for any negative separation effects through increasing income and opportunities, as well as reducing vulnerabilities and thus boosting subjective well-being. Migrant remittances appear to amplify the positive associations related to evaluative well-being and positive emotions but do not contribute to reducing stress and depression (Ivlevs, *et al.,* 2019). The majority of these parents (68.7%) felt lonely while their migrant children were away. It should be noted that the incidence of felt loneliness is higher among those who live with the spouses and children of the emigrant sons while they are moving and lower when the former spouse is still alive. The issue of perceived loneliness experienced by the elderly is influenced by the presence of non-migrant sons and other relatives. Non-migrant daughters also play a part in this, but as was already indicated, practically all of the respondents were chosen from areas with a patrilocal residential structure, and the non-migrant daughters frequently settled in or close

to their husbands' homes. They often did not have chances to maintain close contact with their parents when the distance from their parental home was too long. The following worry of a 64-year-old mother will make it clear:

> *She said "I am now living alone in the house where once I used to live with my husband and kids. Husband passed away eleven years ago. The wife and kids of the emigrant son, who works in Dubai as a labourer for a reputable company, resided with her for the first three years. His family is now residing in the new home he built during his previous visit. The mother is frequently invited over, but she prefers to remain in the home where she may live with the memories of her husband. Every child communicates with her over the phone and visits her whenever it is possible them. They are preoccupied with family and personal affairs. They thus lack the time to comprehend the aging mother's emotions and sufferings. Her fears are made worse by her health issues, such as physical pain and headaches. She claimed that all six of her children except the emigrant son were still too young to comprehend her. The emigrant son spent his days with her up to his last visit. She now worries that the son may choose to remain in his newly built house rather than hers in his future home visit".*

This analysis made it clear that most of the respondents reporting loneliness (61%) are those having either only migrant sons/daughters or daughters living away from their parents. All their sons had migrated to Gulf countries or to other countries. It shows that the absence of all sons and daughters intensifies the feeling of loneliness of the elderly parents. Some of the elderly parents were living either with their spouses or alone in their own homes. 4.7 percent of the total female respondents lived alone in their own homes even if their migrant sons had independent houses and could provide better living conditions. Some of the elderly parents often don't choose to live with the family of their emigrant sons or other sons or daughters; either due to the reluctance

to leave their own house or hesitation to depend on their daughters-in-law or other children completely. Feelings of loneliness and isolation are found to be more common among those living away from children and grandchildren.

One of the motivating factors of Gulf migration is the possibility of financial gain (Gulati, 1993; Kannan, 2005). 34.7 percent of the respondents claimed that their families' overall financial situation had improved as a result of their sons' emigration. According to 32 percent of the elderly parents, the sons' emigration and subsequent financial successes improved the family's situation as a whole. Many of the respondents claimed that their increased financial security and better living circumstances also helped them acquire the respect of their immediate family. Some of the respondents revealed that the emigration of sons helped them to clear their debts and equipped them to avail of better nutrition, health care, and medical facilities. It is generally accepted that migration from the Gulf region often helped people buy durable goods, and other assets, and gave gifts to their close family members and social networks as well. The relatives too benefited from the close association with the migrant families by receiving valuable 'foreign' gifts and financial assistance (Sekher, 1997). However, some of the parents stated that there has been no improvement in the standard of living or financial situation after their kids left for immigration. This is also given a spot on the list of things that made it harder for elderly parents to adjust to their new lives. Many of them are dissatisfied with the subpar and unavailable medical care as well as the financial issues that make it difficult for them to satisfy their daily needs. It should be emphasised that the son's emigration prompted them to take on a number of family duties, including caring for the family's assets, carrying out daily tasks, and providing healthcare for the other family members.

Conclusion

Elderly parents encountered a variety of difficult circumstances during the out-migration of sons, including care and security challenges, psychological problems, and financial difficulties. In order to adapt to these new changes, parents must make a variety of different

modifications. If all of the sons are overseas or they are living alone in their homes, male migration may be more of a challenge for the elderly. Some advantages of moving include improved finances and access to better healthcare. However, because there are many elderly parents who have benefited from migration, it can not be concluded that moving their sons is always advantageous for the parents. In some situations, the migrant sons frequently fail to regard and assist the needs of the parents, making the later years of the elderly more difficult. Mechanisms within the family for the care of the elderly, such as care, protection, and support of children or other kinsmen, regular interaction with the migrant children, and concern from the extended family members are essential to limit the challenges faced by the elderly as a result of the migration of sons.

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Indian Journal of Gerontology
2023, Vol. 37, No. 4, pp. 562-577
ISSN : 0971-4189, UGC No. – List B, Science –121

Qualitative Exploration of the Role of Caregivers in Alzheimer's Dementia

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ABSTRACT

The objective of this study was to understand the roles, responsibilities, and challenges faced by caregivers of dementia patients. Data was collected through telephonic interviews with a sample of ten family caregivers located in three different cities in India. Professional caregivers were excluded from the sample. Excerpts of the interviews were analyzed by using thematic analysis. Caregivers' responses were studied in detail multiple times to generate initial codes from textual data. Eight themes depicting the role of caregivers were identified. Themes that emerged include babysitting and 24-hour nursing care, ensuring patient safety, convincing and consoling the patient, regulating emotions, managing time and household work, financial planning and management, multi-tasking, and balancing, pre-planning, organizing and observing etc.The interpretive paradigm helped in developing an in-depth understanding of the caregiver's perceptions

and lived experiences. The research has some obvious limitations associated with a qualitative framework.

Keywords : Dementia, Alzheimer's disease, Caregiving, Caregiver role, Family caregivers

Dementia,which mostly affects people in old age, is a progressive disease in which cognitive functions gradually decline with time. These cognitive functions prominently include loss of memory and issues related to language,intelligence, learning, executive functioning,and decision-making. There are various forms of dementia among which Alzheimer's type of dementia is the most commonly occurring type of dementia.

Global Estimates of Dementia

Healthy ageing plays an important role in a better quality of life in these precious years of elderly life. Various research reviews have indicated an increase in the number of dementia cases in the coming decades. According to the World Health Organization (2019), every year 10 million new cases of dementia are reported worldwide. It means every 3.2 seconds a new case of dementia is reported in some part of the world.

Alzheimer's Disease International (ADI) in its report titled 'World Alzheimer Report 2015' stated that dementia cases worldwide are estimated to increase to 74.7 million by the year 2030 and 131.3 million by the year 2050. These global estimates of dementia prevalence were prepared based on a systematic review of 273 studies. (Prince, *et al.*, 2016)

Dementia : Estimates for India

According to the National Health Portal of India (2023), nearly 20percent of people aged above 80 years suffer from dementia. The mean age of Alzheimer's patients is 66.3 years in India which is approximately ten years lesser than that ofdeveloped countries.

Kumar, *et al.,* (2020) conducted a thorough review of 14 publications covering a sample of 19673 respondents. They presented their findings in the report titled'Dementia in India-2020' published by the Alzheimer's and Related Disorders Society of India (ARDSI). According to the ARDSI report. The number of dementia patients is estimated to reach 7.6 million by the year 2030. The number of Alzheimer's patients in India is estimated to reach 2.7 million by the year 2030 and 4.6 million by the year 2050 (Minhas, A., 2023).

Caregivers for Alzheimer's disease

Caregiving is the need of the hour especially for elderly people challenged by various physical and mental health disorders. People suffering from mental health disorders require full-time assistance and care. Caregiving for an Alzheimer's patient is moretime-consuming and taxing than caregiving for other illnesses. According to the U.S. National Library of Medicine (2022), almost 11 million family members and other unpaid caregivers have provided caregiving for 16 billion hours to people with Alzheimer's or other types of dementia in the year 2021.

A patient withAlzheimer's dementia goes through various stages of disease progression. The need for care increases with disease progression. People with Alzheimer's dementia usually receive care either from family members orfrom a professional nurse. A majority of them receive care at home than in hospital setups. The caregiver not only provides assistance to patients in feeding, bathing dressing, and cleaning but also takes care of the patient's medication schedule, bill payments,arranging groceries, etc. The responsibilities handled by caregivers are so diverse that it leaves less or no time for managing the caregiver's personal and professional life.

Statement of the Problem

The objective of this research was to explore the lived experiences of caregivers of Alzheimer's patients. The study attempted to understand the role of caregivers, the challenges faced by them, and the way they handle their responsibilities.These caregivers have

unique and insightful perceptions due to their exposure and interaction with the patient.

Method

Sample

The sample included caregivers of Alzheimer's patients. A sample of 10 caregivers was selected conveniently from three different locations i.e., Udaipur, Jaipur, and New Delhi. The hospitals which had Psychiatry departments were contacted to identify Alzheimer's patients. The identified patients' caregivers were provided with all the requisite details about the research. Those who provided their consent were selected for the study. The sample was selected through Purposive sampling based on the inclusion and exclusion criteria. Only those caretakers taking care of the patients for not less than six months duration were included in the sample. Only Family members/ Relatives as caregivers were included.Professional caregivers/ Nurses were not included in the sample.

The sample included three male caregivers and seven female caregivers belonging to different ages between 42 years to 63 years. All the caregivers were educated. The identity of the respondents was kept confidential.Only 3 caregivers out of 10 were working for their jobs, remaining 7 caregivers were not working. The details of the caregivers are given in table 1.

Table 1

Demographic Details of Caregivers

Care-giver	Gender	Age	Employment	Current Occupational Status	Relationship Patient : Caregiver
1	Female	58	Housewife	Not working	Husband : Wife
2	Female	42	Quit the Job	Not working	Father : Daughter
3	Male	55	Government Service	Working	Father : Son
4	Female	50	Housewife	Not working	Mother : Daughter
5	Female	49	Housewife	Not working	Mother : Daughter

6	Male	56	Government Service	Working	Father : Son
7	Female	57	Quit the Job	Not working	Husband : Wife
8	Male	46	Private Job	Working	Father : Son
9	Female	63	Housewife	Not working	Husband : Wife
10	Female	60	Housewife	Working	Husband : Wife

Table 2

Demographic Details of Patients

Patients	1	2	3	4	5	6	7	8	9
Gender	Male	Male	Male	Female	Female	Male	Male	Male	Male
Age (years)	74	75	77	84	79	75	72	76	70
Duration of dementia (years)	10	12	12	13	12	11	9	12	8

There were two caregivers in the sample who took care of one patient; hence the number of patients is 9 whereas the number of caregivers is 10.

An interview schedule was prepared for collecting information. The schedule consisted of questions based on various aspects of caregiving. No personal informationof the respondents was collected. It was kept an anonymous inquiry. Data was collected at the convenient time of the caregiver. The interviews were conducted telephonically. The caregivers were assured about maintaining the confidentiality of their responses.

Analysis of Data

Thematic analysis (Broun, V., and Clarice, V. (2006) was used to interpret the data obtained to identify the data obtained through interviewsas merely a description given by the respondent. A researcher is required to identify some patterns from these descriptions in order to get some meaningful organized information.Thematic analysis was used to make sense of seemingly unrelated material. It

is highly inductive: themes emerge from the data and are not imposed or predetermined by the researcher. It is used to analyse qualitative data and systematically gain knowledge about a person, a group, a situation, or a culture.

Analysis and Interpretation of Findings

Thematic analysis of the present findings revealed the following patterns :

Roles and Responsibilities of the Caregiver

During the interviews with the caregivers, their role in managing the patients' lives was explored. The major role of the caregiver is to provide 24-hour nursing care and such nursing care needs gradually increase with the stage progression of Alzheimer's dementia. One of the caregivers mentioned an incident where the patient twice tried to get out of the house in the middle of the night. The caregiver then had to sleep near the main door to save her from doing so again. At times, the patient gets stubborn and wants to go out, and how the caregiver has to induce fear of dogs in the patient so that the patient does not move out of the house.

> *"...I am taking care of my mother fora long time; my mother needs my care for 24 hours now. My mother tried to get out of the house in the middle of the night. I have shifted my bed in front of the main gate to keep a check on her. My mother used to get stubborn that she has to go out during night time. I used to convince her not to move out during the night by saying that there were dogs outside who would bite her....'*

The caretaker is in the role of the in-charge of the house managing the meal times and also arranging the patient's schedule in such a way that the patient goes to bed early. The caretaker also takes care of all household work such as cooking, laundry, cleaning, and personal grooming of the patient, etc. Here one of the coping mechanisms by the caregiver is the belief system that serving her mother, the patient is her duty and she has to play her role quite well.

"……I have planned her meal times, I plan her breakfast, lunch, and dinner schedule in such a way that she finishes her dinner by 7.00 p.m. and goes to bed by 7:30 p.m. I don't keep a maid, so I do all the household work including laundry and cleaning the house to keep everything tidy. I also take care of grooming my mother..."

Another caregiver mentions that the doctor has given him strength by saying that taking care of the patient is the only alternative. The doctor also suggested the caregivers not to get angry with the patient, as the patient does not know why he is behaving like this. Here one of the coping mechanisms is to develop patience one has to bear with the changes that have been happening with the patient's behaviour and the challenges need to be managed with a lot of patience.

"……the doctor has suggested that taking care of the patient is the only option now. We are serving my father by assisting him in his daily care needs. We are assisting him in all the tasks which he used to do by himself earlier...."

"...the doctor had already said that you will feel anger towards the patient at times but the patient is not aware of any trouble he is causing to you. If you get angry with the patient, it will further disturb the patient and make him more aggressive and perturbed. It is sad when such a disease happens to a family member, but one has to bear with the situation by controlling one's anger...."

The caregiver also has to play the role of a time manager and a pre-planner who keeps things ready before the patient is taken to the washroom. This advanced preparation includes keeping the clothes, lukewarm water, soap, shampoo, sitting chair,etc ready to use in the washroom so that the patient does not feel irritated and gets ready in a short time.

"....I have set fixed timings for different household chores such as washing utensils, cooking, etc. I also keep things ready before taking my mother for a bath so that it is easier

for me to handle the situation. For e.g., I keep the clothes, hot water, shampoo, soap, etc.ready. I also place a plastic chair in the bathroom on which my mother sits to take a bath, when everything is ready, I call her. She has a walker but I also support her while walking and bring her to the bathroom. After her bath, I wipe her and get her dressed. When all these tasks are done then I sit for my breakfast, when she has finished her own...."

Assisting in Daily routine needs

The patient needs full-time care. The main challenge is to take the patient to the toilet especially when the patient is angry. At that time, two to three persons are needed to handle the patient.

"The biggest problem we faced was in taking him (the patient) to the toilet. Sometimes he used to defecate while walking. When we tried to hold him, he used to get angry. We, two-three family members, were needed in cleaning him. He didn't allow us to clean his body parts, clothes, etc., and used to get hostile and aggressive. This situation was tough to handle... '

Management of Finances

The caregiver also has to manage the finances for any medical emergency expenses that may come their way to take care of the patient. The caregiver has to limit her own expenses to pay for the medical and other monthly bills of the patient. The caregiver also plays the role of a financial planner or a money manager.

"We didn't face much problem in managing the finances as my mother (the patient) is also getting a modest pension. My (patient's daughter's) husband is also providing financial support. But of course, it can always be better. I have to keep a little bit aside every month as I don't know what medical emergency can occur. I am also trying to be as miserly as possible these days, I guess. I need to stay ready for any day by saving money; otherwise, it gets difficult to

manage funds immediately in case of emergency. So that way, I am counting everything with minimum expenditure:"

House manager

".....I mean manageable and positive, I have had no major problems or I have issues, I have not faced any kind of setbacks in taking over when I took over after I came here, Little by little. The house was in a complete mess when I came and that is understandable because she is an old woman she was living on her own...."

Pre-Planner for emergency situation

"As of now, I have not faced any medical emergency but if at all that comes, I do have numbers of doctors to contact and then I have also talked with the neighbours who are there to support"

Emotion Regulator

".....overall I have had no major problems in caregiving or in taking care of her., it's been, I am not going to say smooth sailing because with this illness it's not smooth, it's a roller coaster ride every day, you don't know, she has mood swings and all of that but overall I am going to say, I am managing, had a manageable experience....."

A caregiver encounters many situations where patients become hostile and aggressive towards the caregivers also. When the patient forgets things, he/she gets angry and agitated. The ability of the caregiver to manage such situations by not only managing and consoling the patient's emotions but to keep oneself also balanced in these tough situations.

Multi-tasking Role

"....sometimes I (daughter) would just give her (mother, the patient) food, cover her lunch and then my husband would come and pick me up. I would sometimes go back home on my own and spend a few hours with my family, my daughter,

and all that. I return the same day and also bring dinner for my mother. After her meals, she would go to bed."

The daughters who are taking care of their mother living alone also have the responsibility of their husbands and children. Sometimes she has no option but to leave her mother alone for some time to fulfill other responsibilities. Her neighbours work as a support system in such situations.

"I lock the house from outside and hand over the keys to the neighbour and ask them to keep an eye."

A wife taking care of her husband says

"I handle all the tasks related to my husband's care. My grandson helps me. My son also helps me when he is at home. My children support me a lot in taking care of my husband. My daughter-in-law is also a big support. I would serve him (the patient) as long as I am alive and functional."

Balance

The caregivers also have other responsibilities such as going to office, taking care of other household responsibilities, children's education and many others. Caregivers find some ways to balance these different responsibilities while simultaneously taking care of the dementia patient. One of the caregiver says"

"I also have to pay attention towards studies of my daughter. She has her exams scheduled today. I have to sit with both my mother (the patient) and my daughter in the same room. By doing so, I am able to teach my daughter and my mother is also feeling that I am involved with her"

Identification of Codes from Data

On the basis of the detailed information shared by the caregivers, initial codes were generated. Themes were identified from these initial codes.These themes and associated initial codes are mentioned in Table 3.

Table 3

Roles and Responsibilities of Caregivers: Identified themes and its initial codes

Themes Identified	Initial Codes/Cues/Descriptions identified
Babysitting and 24-hour Nursing Care	• I used to ensure that he goes to bed by 7.00 or 7:30 p.m. • We have started his daily-care duties which he used to do by self-earlier. • The biggest problem was managing his urination and defecation-related tasks. We used to take him to the washroom, and then also he used to urinate/defecate while standing. • Bathing, and dressing him every day is my responsibility. • Two-three members of the family used to clean his latrine. • I have taken over all personal grooming-related responsibilities of my mother. • I also manage and schedule her meal times • I fulfill all his daily-care tasks • Dressing the patient is a challenge especially when he is angry. • I hold and bring the patient to the bathroom for taking a shower.
Ensuring Patient safety	• I have to keep an eye on my husband for his safety. • She (the patient) tried to get out of the house in the middle of the night. • I have shifted my bed near the main door, earlier I used to sleep on the floor as it was summer. • I hold her while walking her to the bathroom so that she does not fall. • I consider it like a duty, daily duty • I do have numbers of doctors and neighbors to contact in case of any emergency. • As long as I am functioning and able to take care of her, I would serve her.

Convincing and Consoling the patient Regulator of Emotions Empathy	• When he (the patient) used to get angry and hostile, it became difficult for us to handle the situation. • He used to get stubborn that he has to go out of the house. • I used to convince her by inducing fear in her (the patient) that it is risky for her to go out during the night and dogs would bite her. • The doctor used to say that you (the caregiver) would feel anger but you must control your anger as the patient is not aware of what he is doing. • On whom you will get angry, you must have patience in such situations • I used to keep her (the patient) busy in conversation. • He used to get angry when we used to hold or stop him from doing something risky. • To serve the patient is the only option for us now. • I used to put effort that he (the patient) remains in the present times. • This illness it's not smooth, it's a roller coaster ride every day • She (the patient) has mood swings which we have to manage somehow.
Manager of House and Time	• I try not to waste time. • I have allocated different times during the entire day for various responsibilities. For e.g. I have allocated fixed timing for washing utensils. • Household chores havefixed timing in which it has to be completed. • The house was in a complete mess initially when I had just started taking care, but now I have, kind of, controlled the situation.
Household work	• I do all the household chores. • I don't keep a maid • I also do the laundry and cleaning of the house and keep everything tidy

Financial Planner and Manager	• Financially, I would say my husband is providing. • My mother has a modest pension so not much problem is there. • I have saved money for any possible medical emergency. • We never know any time we might need money for medical reasons. • I am also trying to be as miserly, I guess? • I am counting everything and doing minimum expenditure. • It is difficult to find extra money in case of a medical emergency. • I have been the in-charge of the house.
Multi-tasking and Balancing	• I sit for my breakfast once I finish all the work. • I teach my daughter on her exam days by letting her sit in the same room where my mother (patient) is. • I used to ask the neighbour to just keep an eye.
Pre Planner Organizer Observer	• I eat only after she (the patient) has bathed and eaten. • I have asked my father (the patient) that we will do this work (for which the patient is repetitively asking) when this clock hand reaches here. • I keep all the things ready beforehand such as clothes that she would wear, soap, shampoo, lukewarm water etc. • when everything is ready, I call her

Discussion

The caregiver is an effective manager and is involved in planning the day by allocating time for various responsibilities. The caregivers handle multiple other roles; the role of a mother, a father, and a sibling depending on the needs of the patients. Managing these multiple roles requires the ability such as multitasking and balancing. How things can be kept ready in advance to avoid last-minute rush or chaos needs pre-planning and organizing. Alzheimer's patients face severe

mood swings and exhibit emotional imbalance very frequently. The caregiver has to play his/her role in consoling and calming the patient. The caregivers also ensure the patient's safety as the patients have the tendency to move out of the house and then be unable to return on their own.

The patient, at times, is not able to communicate due to his/her inability to utter words or to use words appropriately. In such situations, the caregiver has to play the role of an observer who is able to read the expressions, body language, and signals given by the patient. Keeping oneself prepared for medical emergencies and planning for financial needs require foresightedness, adaptability, and observation.

Caregiving for someone with Alzheimer's dementia is demanding and challenging for caregivers. The caregiver's role requires 24-hour involvement with the patient leaving less or no time for social engagement and personal care. The caregivers miss social gatherings and do not get to pursue personal and professional interests,hobbies, etc. This takes a toll on their mental and emotional well-being. The caregivers become more vulnerable to physical, emotional, and mental health issues. Caregivers feel anxious, depressed,and frustrated due to a constantly demanding role. The caregiving role, on a daily basis, requires lifting, transferring, and assisting the patient while dressing, and bathing. It causes physical strain on the caregiver.

The care for Alzheimer's patients is expensive due to which the caregivers and their families face financial troubles. Some caregivers have to reduce theirwork hours or quit their jobs to provide optimum care to the patients. This further deteriorates the financial status of the caregiver. The caregivers focus on managing and assisting with the daily routines of the patient by providing taking care of various bodily, medical, and other needs of the patient. The complexity and variety of this role cause behavioural issues among caregivers. The caregivers might feel agitated and aggressive in these demanding situations.

Conclusion

Considering the variety and complexity of caregivers' roles, it is important to draft some policies to help those who are taking care of Alzheimer's patients. This policy can consider developing well-equipped and specialized hospitals and institutions especially devoted to caring Alzheimer's patients. As cases of Alzheimer's dementia are on the rise, the facilities related to dementia care should be increased at hospitals and institutions. The possibility of equipping the house of patients with dementia-friendlysetups should also be explored. As Alzheimer's dementia affects almost 10 to 15yearsofthe life of a patient in which the last 4-5 years are extremely painful. Family members should be trained for providing appropriate care to the patient. A sense of responsibility toward family members fighting this disease is possible in an empathetic society. People need to be trained to be more sensitive towards such patients. If the caregivers feel unsupported by other family members,it can induce stress and feeling of isolation among them. Caregiving should not remain the responsibility of one person from the family but rather a collective responsibility shared bythe entire family. This will not only reduce the workload on the solo caregiver but would also promote his/her health and well-being. Professional nursing care should also be made available at affordable rates so that the caregivers can avail of this facility whenever needed.

Limitations

The present research has explored caregiving experiences through a qualitative research paradigm. The qualitative approach itself has certain limitations as a lack of generalizability due to the small sample size. The focus was more on developing a deeper subjective understanding of the lived experiences of each caregiver.The research has geographical limitations also. Research has excluded professional caregivers who can also provide valuable inputs due to their expertise in dealingwith patients. Future research studies on Alzheimer's caregivers can follow a mixed-method design. Professional nurses who are specially trained for caring for Alzheimer's dementia can also provide valuable input.

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Indian Journal of Gerontology
2023, Vol. 37, No. 4, pp. 578-591
ISSN : 0971-4189, UGC No. – List B, Science –121

Impact of Social Security on the Quality of Life of Elderly Women in Slums of Chennai

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ABSTRACT

The aim of this descriptive studywas to find out the impact of Social Security on the quality of life of 128 elderly widow women, ages varying from 60 years and above, living in slums in Chennai (T.N.). The researchers used a modified WHOQOL BREF with a short questionnaire to collect data. The PSPP 1.4.1 version and SPSS 20 version were used for the data analysis. The relation between social security and the quality of life of these elderly was found statistically significant (P- value <0.05). From the study, it was found that only 39.8 percent of elderly women felt that their lives were meaningful. Satisfaction with health, medical treatment in daily life, the meaning of their life, and satisfaction with sleep capacity for work decided the quality of life of elderly women. But elderly women lacked resources to fulfil their basic needs and it affected their quality of life.

Keywords : Social security, Satisfaction of life, Family, Elderly women, Slums

Elderly men and women in urban areas face a variety of issues, including biological disparities, social and gender roles, and social status. Women confront challenges in a variety of areas since early pregnancies and childbirth result in health issues in old age (Gupta, 2013). They were having trouble paying for health care and other socioeconomic needs, which had impacted elderly women in slums. Widows, illiterate people, and people dependent on others were more common among elderly women. It had an impact on the elderly, forcing them to live alone in slums and relying on an old-age pension. Although elderly people were valued in society, they played a small role in building up the family system. The elderly women shared their life learning experiences, cultivated values among the grandchildren, educated the family culture, and guided the individuals through their wisdom. However, the elderly had difficulty meeting basic needs such as social relations, personal care, nutrition, accommodation, and health.

The quality of life among the elderly was not uniform as it varied from person to person. Physical functioning, cognitive functioning, social functioning, emotional functioning, life satisfaction, health perceptions, economic position, recreation, sexual functioning, energy, and vitality are all aspects of the elderly's quality of life.

Urban areas were experiencing faster socioeconomic growth, making it more difficult to afford a rental home. A subnuclear family, according to the government's classification, was a fragment of a nuclear family, such as a widow with unmarried children or siblings living together (*Rural India Starts to Go Nuclear, Urban Families Grow in Shrinking Space | India News, The Indian Express*, n.d.). According to the 2011 census, the population aged 60 and above accounted for 8.6% of the total population, accounting for 103 million elderly people. With an annual growth rate of around 3%, the population will reach 319 million by 2050. Since 1961, India's elderly population has steadily increased, reaching 13.8 crore in 2021, with

faster growth due to a lower death rate (*Number of India's Elderly to Triple by 2050 - The Hindu*, n.d.).

According to the Technical Group on Population Projections for India and States 2011–2036, India's old population will number around 138 million (13.8 crore) in 2021, with 67 million men and 71 million females "(*India's Elderly Population Grows to 13.8 Cr in 2021 over Lower Death Rates: NSO Study - Business Today*, n.d.).

Poor elderly women were overburdened, and many were forced to work as domestic workers after the age of 60 in order to meet household expenses. Slum-dwelling elderly women lack a social system and have been compelled to work for many years. Some elderly women were eligible to get ₹ 1000 as an old-age pension, which was insufficient to cover rent and other expenses. The elderly women had to stay with overcrowded family members or seek shelter in a hut. They had been struggling with a variety of issues, including a lack of basic necessities, poor health, lack of family support, overcrowding, poor sanitation, dependence on others, and lack of social security. Elderly women had difficulty meeting basic needs when they were residing in slums. Some of the elderly women who were eligible for the old-age pension waited for it every month to pay their rent and other expenses. Most other elderly women were not able to get into and do not have to get into the social security system. Many of the elderly women in slums are ignored and subjected to various types of abuse by their family members, and these elderly women meet their family members occasionally. The WHO defines "quality of life" as "the individual's perception of their position in life in the context of the cultural and value systems in which they live and about their goals, expectations, standards, and concerns." The term "quality of life" was used to refer to four major areas: financial well-being, social well-being, the healthcare system, and income security. The sub-areas are economic empowerment; educational attainment and employment; social status; physical security; basic health; psychological well-being;

social security; and an enabling environment. The researcher aimed to describe the realities of quality life among the elderly in the slums of Chennai.

Need for the study

The quality of life for elderly women, especially widow elderly women, had not improved sufficiently, and many of them had been forced to work as domestic help, sharing the financial burden indirectly. Some elderly women were dependent on their families since they were physically unable to move. The majority of elderly women, have health problems and are neglected by their families. Chennai had virtually become a dumping ground for elderly people, with at least two of them being rescued by the police every day(*Two Senior Citizens Get Abandoned in City Daily | Chennai News - Times of India*,n.d.). Hence, elderly women in Chennai's slums do not have desirable quality of life.

Slums are overcrowded places for living with a lack of basic facilities. The elderly women struggle to meet basic amenities, and most of the elderly women are widows. Most of the elderly women were living separately due to urbanisation and industrialisation. The researchers observed the difficulties of elderly women in slums as part of the community service (Outreach).

The objective of the study was to determine the social security of the elderly women living in slums and find out the quality of life of the respondents.

Method

Sample

For this study, four slums in Zones 5 and 9 of the Greater Chennai Corporation were selected. In the following areas, namely Dr. Thomas Road, South Boag, Bazar Street, and Navalar Nedunchelan Nagar slums in Chennai, around 650 families, and nearly 350 elderly women were living. 128 elderly widows, ages varying from 60 years and above, were randomly selected. These women were living alone in huts and metal sheet roof houses.

Tools

The short form of a modified WHOQOL-BREF scale (translated into Tamil vernacular language for the comfort of the respondents and to get their data) was administered individually for data collection. The WHOQOL-BREF is a 26-item instrument consisting of four domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items); it also includes QOL and general health items. Each individual item of the WHOQOL-BREF is scored from 1 to 5 on a response scale, which is stipulated as a five-point ordinal scale.

The scores were then transformed linearly to a 0–100 scale. The physical health domain included items on mobility, daily activities, functional capacity, energy, pain, and sleep. The psychological domain measures include self-image, negative thoughts, positive attitudes, self-esteem, mentality, learning ability, memory concentration, religion, and mental status. The social relationships domain contains questions on personal relationships, social support, and sex life. The environmental health domain covers issues related to financial resources, safety, health, and social services, living physical environment, opportunities to acquire new skills and knowledge, recreation, the general environment (noise, air pollution, etc.), and transportation.

The researchers collected information about financial well-being, social well-being, health system, and income security. The data was collected from the third week of March to the first week of June 2022.

Statistical analysis

The researchers calculated physical, psychological, and environmental domains, and transformed scores based on WHOQOL BREF user manual guidelines. Then the domain scores were categorised into three levels using percentages. The researcher used PSPP 1.4.1 version and also used the SPSS 20 version in 2022, In this analysis, Pearson's chi-square association tests were used. P-value of less than 0.01 was considered statistically significant.

Findings, and Discussion

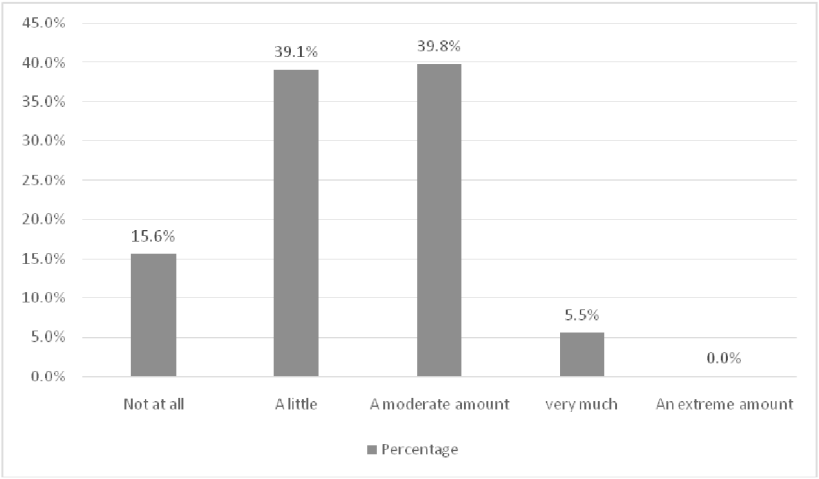

Figure 1 : Meaning of life of the elderly women

Figure 1 represents the respondent's feelings for their life to be meaningful. The study shows that 39.8 per cent of the respondents feel that their life is meaningful, a moderate amount and 39.1 per cent of the respondents have little meaning in their life, while 5.5 per cent of the elderly women are having a very meaningful life. 15.6 per cent of the respondents do not have a meaningful life. It seems that elderly women are facing difficulty meeting their basic needs, and the social security system is not adequate for them.

Table 1

Age with quality of life of the elderly women

		Quality of life					
		very poor	poor	Neither poor nor good	Good very	good	P-Value
Age	60-70	12(11.9)	42(41.6)	28(27.7)	18(17.8)	1(1.0)	0.548
	71-80	3(13.6)	12(54.5)	6(27.3)	1(4.5)	0(0.0)	
	81-90	1(20.0)	4(80.0)	0(0.0)	0(0.0)	0(0.0)	

Social	Not at all	4(14.3)	16(57.1)	6(21.4)	2(7.1)	0(0.0)	0.008
Security	A little	3(6.4)	25(53.2)	9(19.1)	10(21.3)	0(0.0)	
	A moderate amount	9(22.0)	14(34.1)	15(36.6)	3(7.3)	0(0.0)	
	very much	0(0.0)	2(18.2)	4(36.4)	4(36.4)	1(9.1)	
	Extremely	0(0.0)	1(100.0)	0(0.0)	0(0.0)	0(0.0)	

Key value : QL (var 0002), Age (Var 0001), safe in daily life (Var 0009)

Since the p-values of the Chi-Square test between age and quality of life were greater than 0.05. There is no statistically significant association between physical health and quality of life. The p-value of the Chi-Square test between social security and quality of life was less than 0.05. There is a statistically significant association between social security and quality of life.

Table 1-2

Domain score of the quality of life

Domains		**Quality of Life**					**P-Value**
		Very Poor	**Poor**	**Neither poor nor good**	**Good**	**Very good**	
Physical Health	Poor	8(15.38)	31(59.2)	11(21.15)	2(3.85)	0(0)	<0.0001
	Fair	5(14.29)	19(54.29)	9(25.71)	2(5.71)	0(0)	
	Good	3(7.32)	8(19.51)	14(34.15)	15(36.59)	1(2.44)	
Psychological	Poor	12(21.82)	34(61.82)	8(14.54)	1(1.82)	0(0)	<0.0001
	Fair	3(6.67)	17(37.78)	16(35.56)	9(20)	0(0)	
	Good	1(3.57)	7(25)	10(35.71)	9(32.14)	1(3.57)	
Environment	Poor	12(24)	31(62)	7(14)	0(0)	0(0)	<0.0001
	Fair	3(8.33)	13(36.11)	13(36.11)	7(19.44)	0(0)	
	Good	1(2.56)	11(28.21)	14(35.90)	12(30.778)	1(2.56)	

Since the p-values of the Chi-Square test between physical and quality of life were less than 0.05, the null hypothesis was rejected at the 0.05 level. There is a statistically significant association between physical health and quality of life. Similarly, the p-values of the Chi-Square test between psychological, environmental, and quality of life

were less than 0.05. The null hypotheses were rejected at the 0.05 level. There is a statistically significant association between psychological wellness or well being and the quality of life of the elderly and a significant association between the environment and the quality of life of the elderly. There is no relationship between age and the quality of life of elderly women.

To know the social security of the elderly in slums. It included satisfaction with health, being able to meet their needs, physical environment, and support from known people.

The health status of elderly women was that 44.5 percent of the respondents were dissatisfied with their health and 17.2 percent of them were very dissatisfied with their health status. 18.8 percent of the elderly women seemed to be neither satisfied nor dissatisfied with their health, and 17.2 percent of the respondents were satisfied with their status of health. Only 2.3 per cent of the respondents were very satisfied with their health.

Thirty seven and five percent of the elderly women had a moderate amount of a healthy physical environment, and 7.8 percent of the respondents had a very healthy physical environment. 1.6 per cent of the respondents had an extremely healthy physical environment. 37.5 percent of the elderly women had a little healthy physical environment and 15.6 of them did not have a healthy physical environment at all. 33.6 percent of the respondents had money to meet their needs moderately and 37 percent of them had money to meet their needs only a little. 28.1 percent of elderly women had not been able to meet their needs at all. Only 0.8 per cent of them had money to meet their needs.

Concerning personal relationships, 35.2% of elderly women were dissatisfied, and 28.9 percent of them were neither satisfied nor dissatisfied. Around 14.1 per cent of the respondents are very dissatisfied. Only 21.9% of the elderly women were satisfied with their relationship, and none of the elderly women were in the very satisfied category.

Thirty-two per cent of the respondents were dissatisfied with the support from friends, and 24.2 percent of them were neither satisfied nor dissatisfied with the support from friends. 19.5 percent of the respondents were very dissatisfied with the support that they received from friends. Only 24.2% of the respondents were satisfied with the support they received from friends. Therefore, the elderly women were not satisfied with the social security of their lives.

2. To understand the quality of life of the respondents, which included satisfaction with health, medical treatment in daily life, the meaning of their daily life, and satisfaction with sleep capacity for work.Most (45%) of the elderly women in slums were poor, and 26.6 percent of the elderly's status was neither good nor poor. Only 12.5 percent of the elderly had a very poor quality of life, 14.8 percent had a good quality of life, and 0.8 percent had a good quality of life.

The physical pain of the elderly women was that 28.9 percent of the respondents had pain that prevented a moderate amount of physical work and 20.3 percent had very much pain and it affected taking care of their needs. 32 percent of the respondents had physical pain and it had little effect, and 3.1 percent of the elderly women had pain and it prevented them in extreme degree. Only 14.8 percent of elderly women were unaffected by fulfilling day-to-day work. For daily work functions, 30.5 percent of elderly women require moderate medical treatment, 25 percent require very much medical treatment, and 2.3 percent require an extreme amount of medical treatment. 29.7 percent of them depended on medical treatment a little, and 12.5 percent of the respondents did not need all medical treatment to function in daily life.

Status of meaning in life : 39.1 per cent of the respondents had little in their life. 39.8 percent of the respondents had a moderate life and 15.6 percent of them had a meaningful life. 3.5 of the elderly women had a meaningful life. The elderly women had poor quality of life as they had health issues and they required treatment. Most of them were not feeling meaningful, and some of the elderly women were not satisfied with sleep.

Forty-two and two percent of the respondents could concentrate on work a little, and 30.5 percent of them were able to concentrate moderately. 21.1 percent of the elderly women were not able to concentrate on their work and 6.3 percent of them. Nearly 36.7 per cent of the elderly women had little safety and 32 percent of them were moderately able to. Around 21.9 percent of the elderly women did not have safety at all and 8.6 percent of them had quite much, and 0.8 cents of the respondents had a high level of safety.

Regarding the leisure activity of the elderly women, 41.4 percent of the respondents had little leisure activity and around 35.2 of the respondents had moderate leisure activity. 3.1 percent of the respondents had very much leisure activity. 20.3 percent of the elderly women did not have leisure activities.

Satisfaction of the respondents: 35.2 percent of the elderly women were dissatisfied with themselves and 28.9 of them were neither satisfied nor dissatisfied. 14.1 percent of the elderly women were very dissatisfied with themselves. Another 21.9 percent of the respondents were satisfied with themselves and none of them was very satisfied with themselves. Around 22.7 percent of elderly women did not enjoy their lives and believed they had been a burden to others. 37.5 percent of the respondents were enjoying their life a little. Another 37.5 per cent of the respondents enjoyed life moderately and only 2.3 percent of them enjoyed life very much.

Twenty-eight ant one percent of the elderly women were dissatisfied with the condition of their living place and 27.3 percent of them were neither satisfied nor dissatisfied with their living place. 18.8 percent of the respondents were very dissatisfied. 25.8 percent of the elderly women were satisfied with their living place. According to the health service of the respondents, 38.3 percent of the elderly women were dissatisfied and 21.1 percent of them were neither satisfied nor dissatisfied with access to the health service. 14.1 percent of the elderly women were very dissatisfied and 25.8 percent of them were satisfied with their access to health

services. 0.8 per cent of the respondents were very satisfied with access to health services.

Discussion

Ageing is a biological process of human life and it is unavoidable in life. Loneliness, poverty, and disease are difficult experiences in life for the elderly. (Davalagi *et al.*, 2015). Age-old health problems were common among the elderly, such as musculoskeletal, psychosocial, respiratory, cataract, ear problems, and hypertension. It forbade social activity outside of the home and led to a pessimistic outlook on life (Prakash *et al.*, 2004). The majority of elderly people do not have savings, and elderly women have difficulty meeting day-to-day household expenses. Some of the elderly women were concerned about infighting among sons, male alcoholism, and defiant behaviour of daughters-in-law. It led to complications for the elderly women, as they had the responsibility of raising the children and running the household; payback of money borrowed from money lenders; death of the son-in-law and concern for the widowed daughter; concern for the daughter married into a very poor family; son and daughter to be marriaged; education of grand children; disabled children and any untoward incident (Naresh, *et al.*, 2012). The vast majority of elderly women were employed in unorganised sectors, and they lacked adequate social security and health care. They face poverty, ill health, and a low quality of life.

Quality of life of elderly people

Quality of life was defined in nursing as a subjective perception and evaluation of individual living conditions based on an internal standard (values, expectations, aspirations, etc.); QOL was considered to be a multidimensional, subjective, value-driven construct (Soósová, 2016). In the elderly, the most significant aspects of QOL assessment were autonomy, self-sufficiency, decision-making, the absence of pain and suffering, the preservation of sensory abilities, the maintenance of a system of social support, a certain financial level, a sense of usefulness to others, and a certain degree of happiness (Gurková, 2011). They had low economic security, fewer

employment opportunities, and more household responsibilities (Gupta, 2013).

The elderly people often visit primary health centres and private clinics due to old age sicknesses and physicians must check the quality of life of the elderly people. They can bring holistic healthcare treatment along with treatment of disease or illness (Parsuraman, *et al.,* 2021). Elderly people are a vulnerable population and it is important to know about their health and well-being (Singh, *et al.*, 2022). A Change in the environment in a lockdown situation might have an indirect impact on qualiy of life (Colucci *et al.*, 2022). The living environment is well-recognized as part of the quality of life (Daely, *et al.*, 2022).

The slum was a perfect example of a poor living situation in which low-income residents were deprived of basic amenities. It was overcrowded and congested. Elderly people are prone to non-communicable diseases because of their age, and they also have a risk of contracting communicable diseases due to a lack of basic amenities such as clean water, adequate air circulation, and healthy food. Thus, health status was lower compared to non-slum areas (Yeye Adumoah Attafuah, *et al.*, 2022).

Residence of the elderly people is the additional deciding factor in socio-demographic areas (Singh, *et al.*, 2022). Social connection and support from the environment was identified as an important component of quality of life (Khadka *et al.*, 2022)

Limitations of the study

The researcher collected 128 samples from 2 zones in Chennai, but in reality, many of the elderly women belong to the same category. So the size of the sample is very minimal

The study did not cover all slums in Chennai; it covered only five slums in Chennai city.

The sample size is small and it was not collected from all the slums in Chennai. Elderly women had different problems, and their quality of life could not be the same. The study focused on only two zones. It did not represent the problems of elders in other zones. Therefore, the research findings cannot be generalized.

The study was not focused only on widows or separated people, but it conducted studies on who was available.

Conclusion

When there was a lack of value system and the well-being of others, elderly women provided moral support to the family activities. However, elderly women in slums were not treated in a respectable manner and often became victims of family members and society. They did not have a support system to meet the basic needs and depended on others due to age or old problems. Most of the elderly women in slums did not have a good quality of life. Numerous factors influence life quality, including socioeconomic status, family support, psychological well-being, and physical health. The state/central government could strengthen the social support system through, old age pension schemes, and other welfare measures to fulfill the basic needs of the poor elderly.

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Indian Journal of Gerontology
2023, Vol. 37, No. 4, pp. 592-602
ISSN : 0971-4189, UGC No. – List B, Science –121

Prevalence of Frailty in Older Adults of Ahmedabad

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ABSTRACT

Frailty is a major syndrome associated with ageing. It results from cumulative decline across multiple physiological systems and causes vulnerability to adverse outcomes that carry an increased risk for poor health outcomes including falls, incident disability, hospitalization, and mortality. The present study evaluates the community-based prevalence of frailty and its association with various other factors. Two hundred sixteen community-dwelling older adults from different zones of the city of Ahmedabad were screened for frailty using Edmonton frail scale (EFS) and data was analyzed. The study reported a prevalence of frailty of 31.8 percent in older adults. The prevalence of apparently vulnerable older adults was 40 percent. Frailty was also associated with age, gender, and number of chronic co-morbidities ($p<0.05$). On the basis of present findings, it may be concluded that frail older adults are at risk of

having poor health consequences and so identification of such people is important for frailty prevention and treatment

Keywords : Community-dwelling older adults, Frailty, Ahmedabad

Frailty represents a prevalent syndrome associated with unfavorable health outcomes among older individuals. It is characterized by a decline in various physiological systems at the cellular level, coupled with a disruption in homeostasis. This disruption contributes to an elevated susceptibility to falls, increased dependence, disability, hospitalizations, and heightened mortality risks (Xue, Q 2011, Ng, T. P., *et al.,* 2014, Buckinx, F*et al.,* 2015). The concept of frailty encompasses aspects spanning the physical, psychological, and social domains. This condition arises from the cumulative impact of pro-inflammatory responses and the release of molecules like interleukin-6 and other cytokines, resulting in cellular deterioration and senescence. It deviates from the normal aging process by virtue of its impaired ability to restore homeostasis promptly and regain functionality following stressors such as infections, falls, or surgeries. Ultimately, frailty leads to a diminished capacity for carrying out daily activities and reduced reserves of energy.

Numerous acceptable definitions and measurement approaches exist for evaluating frailty. Among these, the widely recognized Fried's Frailty Phenotype stands out as a popular assessment method. Additional methods for assessing frailty include the Frailty Index of Accumulative Deficits (FI-CD), the Study of Osteoporotic Fractures (SOF) Index, the Edmonton Frailty Scale (EFS), and the Clinical Frailty Scale (CFS) (Dent, E., *et al.*, (2016) and Sutorius, F. L., *et al.*, (2016)

Frailty among elderly individuals poses a notable risk for adverse health outcomes. Therefore, from a clinical perspective, it is imperative to identify such individuals to facilitate prevention and

treatment. A systematic review conducted by Collard, R. M., *et al.*, (2012) revealed a prevalence range of frail older adults in the community spanning from 4.0 percent to 59.1 percent, a prevalence that also exhibited an upward trend with advancing age. An analysis encompassing multiple countries including China, India, Mexico, Ghana, Russia, and South Africa reported a frailty prevalence of 44.5 percent specifically for India (Harttgen, K., *et al.*, 2013, Biritwum, R., *et al.*, 2015)) Considering the scarcity of research concerning frailty within the Indian population, the present study was initiated with the objective of assessing frailty among older adults residing within Indian communities.

Methodology

This study is a descriptive cross-sectional research design. The sample consisted of 216 older adults residing in various neighborhoods within Ahmedabad city, chosen through convenient sampling. The study encompassed both males and females aged over 60 years who expressed a willingness to participate. Individuals who had undergone recent surgery, had known neurological conditions, had communication difficulties, or were experiencing acute pain in weight-bearing joints were excluded from participation. Detailed information about the study methodology was provided, and written consent was obtained from the participants.

Outcome measures

Along with demographic details of the subjects,education level, and the number of chronic co-morbidities (hypertension, diabetes mellitus, and heart disease) werealso considered.

For the assessment of frailty

Edmonton Frail Scale (EFS) was used.It is a valid and reliable measurement (Rolfson, D. B., *et al.*, (2006) and Perna, S., *et al.*, (2017) tool for the identification of the frail. The EFS is scored out of 17 and contains nine components that cover all the major factors

predisposing to frailty. The components assessed in EFS are cognition, general and self-health status, functional independence, social support, medication, nutrition, mood, incontinence, and balance and mobility.

In EFS, two components are examined with the performance-based test. 1) The Clock drawing test for cognition and 2) the Timed up and Go test for balance and mobility. Component scores are summed and the following cut scores are used to classify frailty severity: not frail (0–5); apparently vulnerable (6–7); mildly frail (8–9); moderately frail (10–11) and severely frail (12–17)

In the present study, the EFS score was stratified into 3 Groups: Robust/Non-frail (0-4 points), Pre frail (5-6 points), and Frail (7-17 points)

Prevalence was calculated and the chi-squaretest was used to analyze frailty by socio-demographic factors, number of co-morbidities, and education level. The level of significance was kept at 5 percent.

Results

Two hundred sixteen subjects of more than 60 years of age were examined. The mean age was 73.24 ± 8.3. There were 121 (56%) women and 95 (44%) men.

In this study, 28.2 percent of older adults had a robust (non-frail) score on the EFS (0–4), 40 percent had apparently vulnerable scores of EFS (5–6), and 31.8 percent had different levels of frailty (including mild, moderate and severe frailty) on the EFS (7-17) that is shown in figure 1.Table 1 shows the frailty by gender, education level,age group, and chronic diseases. Age, gender, and chronic diseases were significantly associated with frailty ($p<0.05$). In this, the level of education was associated with frailty. Table 2 shows subjects in each category of the Edmonton Frail Scale (EFS).

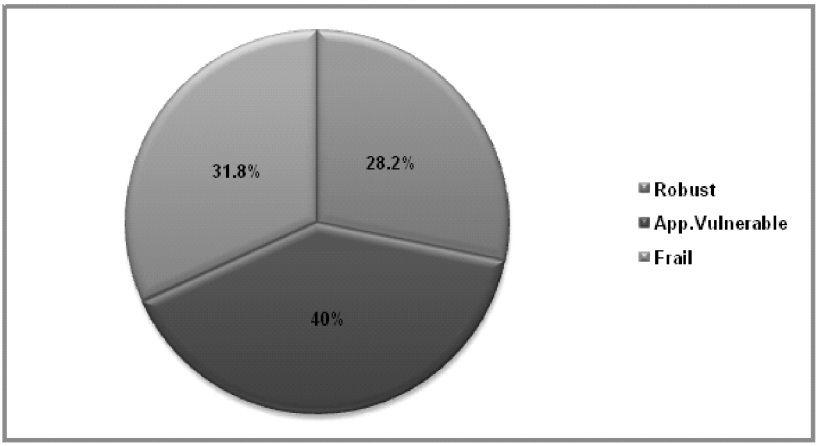

Figure 1: Prevalence of frailty

Table 1

Characteristics of subjects according to frailty

Characteristics	Frail (69) n (%)	Non frail (61) n (%)	p value
GENDER			
Female	40 (58)	25 (41)	<0.05
Male	29 (42)	36 (59)	
AGE GROUP			
60 - 69	20 (29)	33 (54)	<0.01
70 - 79	23 (33.3)	23 (37.3)	
>80	26 (37.7)	05 (8.3)	
EDUCATION			
< 10 years	45 (65.2)	43 (70.5)	0.53
> 10 years	24 (34.7)	18 (29.5)	
CHRONIC CO-MORBIDITIES			
0	10 (14.49)	20 (32.7)	<0.05
1	36 (52.17)	27 (44.2)	
2	23 (33.34)	14 (22)	

Table 2

Proportion of Subjects in components of EFS

S.No.	Category	Possible Answers (Score)	Answers	
			n = 216	%
1	**Cognition** Clock Drawing Test	Approved (0)	59	27
		Failed-minimum errors	45	21
		Failed-significant errors	112	52
2	**General health status** In the past year, how many times have you been hospitalized?	Zero (0)	148	68
		1 - 2 (1)	54	25
		> 2 (2)	14	7
3	In general, how would you describe your health?	Excellent, very good or good (0)	36	17
		Fair (1)	126	58
		Poor (2)	54	25
4	**Functional independence** With how many of the following activities do you require help?	0 - 1 (0)	180	83
		2 - 4 (1)	36	17
		5 - 8 (2)	-	-
5	**Social support** When you need help, can you count onsomeone who is willing and able to meet your needs?	Always (0)	18	8
		Some times (1)	90	42
		Never (2)	108	50
6	**Medication use** Do you use five or more different prescription medications on a regular basis?	No (0)	135	62
		Yes (1)	81	38
7	At times, do you forget to take your prescription medications?	No (0)	144	66
		Yes (1)	72	34

8	**Nutrition** Have you recently lost weight such that your clothing has become looser?	No (0)	157	72
		Yes (1)	59	28
9	**Mood** Do you often feel sad or depressed?	No (0)	112	52
		Yes (1)	104	48
10	**Continence** Do you have a problem with losing control of your urine when you do not want to?	No (0)	144	66
		Yes (1)	72	34
11	**Functional performance** Timed up and Go Test	0-10 seconds (0)	126	58
		11-20 seconds (1)	90	42
		> 20 seconds (2)	-	-

Discussion

This study reports the prevalence of 31.8 percent of community-dwelling older adults of Ahmedabad having different levels of frailty. Another study on Indian older adults (Kashikar, and Nagarkar, 2016) revealed a prevalence of 26 percent of frailty. As there are various different methods for the evaluation of frailty, the prevalence of frailty can vary in the same population of older adults, depending on the instrument used.

The percentage of frailty in this study is higher in women as compared to men and increases with age. This was consistent with the results of various studies (Collard, R. M., *et al.*, 2012, Harttgen, K., *et al.*, 2013, Amaral, F.L.J.D.S., *et al.*, 2013, Clegg, A., *et al.*, 2013).

The study by Das, S., and Chandel, S. (2018) on frailty patterns in Indian women reported a prevalence of 31.1 percent of frail rural Indian women.

The presence of frailty associated with older people with chronic diseases is a predictor of mortality and hospitalization(Von Haehling, S., *et* al., 2013; Das, S., and Chandel, S., 2018). This study also shows a number of chronic diseases associated with frail as compared to non-frail ($p < 0.05$).

The results of the study also suggested that 52 percent of participants had errors on the clock drawing test. The clock drawing test has been recognized as a simple and useful tool for functional screening and has been used for early dementia detection. In addition, our results showed that 34 percentof older people at times forget to take their prescribed medications. There is a strong correlation between cognition and frailty. Cognitive impairment in older adults results in decreased physical functioning and affects QOL (Chang, C. I., *et al.*, 2011; Brigola, A. G., *et al.*, 2015; Kim, D. 2016).

Mobility is an important requisite for functional independence. In this study, 42 percentof older adults took more than 11 seconds in a timed up-and-go test which shows impaired balance and greater risks for falls. A study (Fhon, J. R. S., *et al.,* 2013) showed that there was a greater chance of falling among frail elders as compared to non-frail.

Other factors that affect frailty are social support, general health status, weight loss, and poly-pharmacy. 58 percent of subjects in this study reported their general health as 'fair' and 38 percent took more than 5 medicines per day (polypharmacy).

The apparently vulnerable older adults 40 percent, may convert into frail in the future if not screened for frailty. Thus,the identification of frailty among older adults is important to prevent the transition from pre-frail to frail and prevent negative health outcomes.

Conclusion

India is a country with a large number of older adults and frailty is a common health syndrome in this age with adverse health consequences that can lead to disability and dependence. Early

identification of older adults for frail or apparently vulnerable should be done which will provide an opportunity to suggest appropriate preventive and rehabilitative actions.

- The first author is a Ph.D. scholar and the second author is her guide.

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