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Essential Strategies for a Better Life in Old Age : An Indian Perspective*

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ABSTRACT

This paper examines the strategies to achieve a better family life for older people in the later stages of life. A total of 197 elderly (102 males and 95 females), aged 60 to 80 years and above, living with family members, were randomly selected from Aligrah (U.P.). These subjects were interviewed individually in depth using an interview schedule with open-ended questions. The collected data was transcribed and analysed. Fifteen themes emerged from the study identified as essential strategies that the potential ageing population needs to undertake as a safeguard to achieve a better life in old age. The study's findings revealed that our value systems are gradually becoming less effective in fulfilling the needs of dependent and older family members. Therefore, it is essential for the ageing population to be cautious and make strategies for a better life in old age before they age.

Keywords : Strategies; Old Age; Elderly Care; Family Relationship; Family Support

Old age is marked by an unavoidable economic decline, followed by less family support and, as a result, an increase in self-neglect incidence (O'Brien, 2011). This condition is sometimes found to be quite pathetic and mandates everyone to have an extensive plan for their old age to have a more resilient life, especially those who are more likely to join the club of older people soon. Resilience in older adults refers to the ability of an older person to adapt and cope with challenges (Rosowsky, 2009), associated with factors including positive self-perceived health, participation in the activities of daily living, and being free from depressive symptoms (Rodrigues & Tavares, 2021). A study highlighted that a decent standard of living in old age refers to factors such as social relationships, health, financial conditions, and independence (Netuveli & Blane, 2008). To achieve a resilient and better life in old age, older people need to remain active physically, mentally, and socially (Tournier, 1989). There are some essential factors for quality of life in old age: physical, psychical, and social fitness; a long and happy partnership with a loved one; and self-perception of the state of one's health (Ors Montenegro & Laguna-Pérez, 1997). Moreover, some essential studies conclude that the quality of life in old age is influenced by social contacts, dependency, health, and material circumstances (Netuveli & Blane, 2008). Studies also suggest that older adults may decline in health status, limiting their well-being in old age (Smith, *et al.*, 2002). That requires older adults to be more cautious about their health.

For centuries, elderly persons in India have enjoyed a respectable position in society, mostly living with family members and having their needs taken care of mutually by family members. However, in the last few decades, India has witnessed many familial and societal changes that hampered the smooth transaction of familial roles and obligations toward older persons and undermined the quality of care and support for older people in the family. However, we live in a highly dynamic society where values and social norms change

daily for numerous reasons. Choices of family members and familial structure are changing rapidly; most prefer a nuclear family over an extended or joint family. In contemporary society, people are becoming more materialistic and individualistic, and they inevitably exhibit a great fascination with a self-centered lifestyle, which leads to the commodification of older adults.

The older generation often finishes all their hard-earned money and resources for their children, especially their education, career, and marriage. However, when elderly parents need money and resources, children do not respond to them as their parents used to do in the past. Furthermore, it was observed that the peaceful living of three generations under the same roof is more challenging. Often, a slight difference among the family members becomes a continuous source of friction. Like differences in views among mothers-in-law and daughters-in-law, they cause big adjustment problems in the family. Usually, it started with a small quantity of verbal conflict that reached up to psychological and physical abuse with older people. This kind of family environment has created new challenges for older people living with family members at home. Therefore, older people need to identify and plan some essential strategies for achieving a better life in old age before their active retirement. A study found that the "key dimensions of a good later life for people include health, financial security, and social connections" (Dixon, 2015, p. 5).

Table 1 provides a thorough understanding of the socio-economic dynamics of elderly people, comprising 197 people. Table 1 includes age groupings, genders, religions, marital statuses, child counts, educational backgrounds, monthly incomes, income sources, employment histories, and health conditions.

Method

Sample

197 elderly respondents of both sexes (102 males and 95 females), ages 60 to 80 years and above, were randomly selected from Aligarh (U.P.). A person who has completed sixty years and living with family members was selected as a respondent.

Sample was drawn from the updated voter list for the Uttar Pradesh legislative assembly election held in 2017.

Table 1

Socio-Economic Status of the Respondents

Variable		**Frequency (n = 197)**	**Percentage**
Age Groups	Young-old (60-69)	117	59.4
	Old-old (70-79)	56	28.4
	Oldest-old (80+)	24	12.2
	Total	197	100.0
Sex	Male	102	51.8
	Female	95	48.2
	Total	197	100.0
Religion	Hindu	105	53.3
	Muslim	92	46.7
	Total	197	100.0
Marital Status	Married	157	79.7
	Widow	22	11.2
	Widower	18	9.1
	Total	197	100.0
Number of Children	1-2	7	3.6
	3-4	91	46.2
	5-6	79	40.1
	7-8	20	10.2
	Total	197	100.0
Education Qualification	Illiterate	63	32.0
	Up to Secondary Edu.	62	31.5
	SSSC to Graduate	60	30.5
	PG & Above	12	6.1
	Total	197	100.0
Monthly Income	No Income	93	47.2
	Up to 15000	55	27.9
	16000-30000	36	18.3
	Above 31000	13	6.6
	Total	197	100.0

Source of Income	No Income	93	47.2
	Rent	15	7.6
	Pension	57	28.9
	Dependent Pension	11	5.6
	Old Age Pension	6	3.0
	Other Sources	15	7.6
	Total	197	100.0
Occupational Back-ground	Govt. Job	44	22.3
	Private Job	22	11.2
	Self Employed	45	22.8
	Home Maker	63	32.0
	Daily Wager (Labourer)	23	11.7
	Total	197	100.0
Health Status	Ill	36	18.3
	Neither Ill nor Healthy	85	43.1
	Healthy	76	38.6
	Total	197	100.0

(Source: Primary Data)

The researchers prepared a semi-structured interview schedule with open-ended questions.Open-endedquestions enabled greater freedom for older adults to express their views. They invited them to reflect on critical issues, such as elderly perceptions about later life and essential strategies for a better life in old age. Interviews averaged approximately 1 to 1.5 hours.

The subjects' responses were analysed to identify essential strategies the potential ageing population needs to undertake to safeguard their ability to achieve a better life in old age.

Findings

Based on the responses from elderly respondents, essential strategies have been delineated as to how older people cope with life. Older adults were found to believe that one can achieve a better and more peaceful life in old age, subject to the condition that they need to adopt some strategies as preparation for old age or retired

life. Table 2 collates and presents some opinions expressed during the interviews regarding essential strategies.

Table 2 gives an overall picture of the responses that suggest the key strategies used to achieve a better life in old age, in which older people may enjoy ideal living conditions to live their lives peacefully. Out of these above suggestions, some are highly recommended; 84.26 percent of respondents suggest that one must live a life with values to inculcate humility and respect in your children; 75.13 percent of respondents believed that one must provide a proper family environment and quality education to his children; 69.54 percent of respondents emphasised keeping all the property in your possession till the last breath; and finally, 67.00 percent of respondents suggested the demonstration of proper behaviour towards all members of the family, which may facilitate the proper inculcation of right thoughts and behaviour among the younger generation.

Table 2

Essential Strategies for a Better Life in Old Age

Strategies for a Better Life in Old Age	***Frequency (n = 197)***	***Percentage***
Maintaining good health	129	65.48
Planning for financial security in later life	105	53.29
Debt-free retirement	78	39.59
Ownership of property in own name	137	69.54
Self-reliant and independent life	96	48.73
Active participation and involvement in family matters	86	43.65
Social and emotional resilience	98	49.75
Facilitate a healthy family environment and provision of quality education for children	148	75.13
Lead a life filled with morality and values to inculcate humility and self-respect	166	84.26
Inculcation of the value of caring of elderly parents	128	64.97

Maintenance of a cordial family atmosphere	132	67.0
Family members are equal stakeholders	101	51.26
Consider the differences in views of family members	85	43.15
Try to be less complaining, less interfering, and not abusive	96	48.73
Avoid authoritarianism	127	64.46

However, 43.15 percent of respondents suggested giving due importance and recognition to the divergent views expressed by family members so that everyone feels important and differences in opinion are resolved amicably, and 39.59 percent of respondents advised that they try to be free from all debts before retirement. It is important to note that the last two responses were less pronounced but are also significant in achieving a peaceful life in old age. The strategies that are essential for the ageing population to achieve a better and more peaceful life in old age are explained below in detail with field excerpts.

1. **Maintaining good health :** A qualitative study was conducted in the United Kingdom among thriving boomers to know their views and experiences about later life. Study findings revealed that most enjoy good health and consistently try to maintain existing health conditions through a controlled lifestyle – healthy eating and recommended exercises (Dixon, 2015). Health and the subjective well-being of an individual have a positive association. Studies suggest that older people's poor health is more likely to explain poorer subjective well-being among aged cohorts (Jivraj, *et al.*, 2014; Xu, *et al.*, 2019). Good health is among the prerequisites for a happy life. Therefore, maintaining good health must be the priority of an individual, especially those on the verge of entering aged cohorts.

   "As you know, health is wealth! This proverb is not simple, by the way! It has a great meaning and message! If a person is not healthy and strong, her life will be a living hell! She cannot enjoy her life. Rather, she feels

suffocated every moment and is more likely to become a liability to her family members. So, it emphasises that every ageing person must be health-cautious, which is necessary to deal with untoward life situations and enjoy life's essence" (F, 75 years old).

2. **Planning for financial security in later life :** A study revealed that about half (47%) of middle-aged people faced financial distress in later life since they spent all their money in meeting the needs of children and family members, which landed them in financial crisis in old age as much as they could not even serve their own needs (Dixon, 2015). In contrast, possession of assets "may enhance financial satisfaction by fostering a sense of economic security and access to a buffer that can be drawn upon in times of need" (Hansen, *et al.*, 2008, p.8). In India, significantly fewer people have assured retirement pensions except government employees. Most are self-employed or engaged in agricultural activities without assured retirement pensions. Generally, people are more committed and focused on children for their education, job settlement, marriage, and housing for the family. Usually, after fulfilling all commitments, an individual exhausts their income, savings, and other property assets. Planning for old age is generally a strange idea in India. However, it is standard in Western society. Table 2 reveals that 53.29 percent of respondents favour planning a budget for the latter stage of life, especially in the absence of a pension.

   "I did not work for the government department. Therefore, I do not have any assured retirement pension. I have worked for several years for a construction company in Saudi Arabia. I knew that I would not have any assured monthly income by way of a pension, so I planned to save some money from my earnings to build an asset back home before leaving Saudi Arabia and

built some residential flats for rent purposes. All the flats are on rent now, which is my income source. The returns are good enough to fulfill my needs easily without any financial dependency on others" (M, 72 years old).

3. **Debt-free retirement :** "Social scientists have consistently found that socio-economic status is strongly associated with mental health" (Drentea, 2000, p. 437). "Financial exploitation of older adults is a common and serious problem" (Peterson, *et al.*, 2014, p.1615). Several cases of indebtedness can be noticed in the field; many older people were found financially indebted to either relatives or banks in due course of fulfilling their duties towards children, such as education and marriage. However, now their children are either unwilling or incapable of supporting their parents financially to repay their debts. Now, parents are struggling to repay their debts on their own. This situation is undoubtedly uncomfortable for an individual, causes continuous distress, and negatively impacts older people's psychosocial health and well-being. To avoid this unfortunate situation, every older person must be free from all debts before retirement. Table 2 shows that 39.59 percent of elderly respondents recommended that the future ageing population be free from all debt before retirement.

   "I have regrets for a huge blunder! By profession, I was a full-time government school teacher and a part-time farmer. Even after my government job, I have never given up my farming activity to fulfill the needs and aspirations of my children and provide them with better education and avenues to excel in life and achieve whatever they want. I have spent all my hard-earned money and even taken loans for their education and house construction. Now, they are well-settled and busy in their lives. None of them talked about or supported

me in repaying my loan. I am still repaying my pension loan, causing hardships" (M, 66 years old).

4. **Ownership of property in own name :** Data reveals that 69.54 percent of elderly respondents recommended keeping all the property in their possession till their last breath as a precaution or as a security for family care and support. Since the elderly lose ownership of the property either by transferring it in the name of children or/and to family members, he/she will probably compromise their chance of getting family care and support. Property or assets with older people are attractive to family caregivers and work as an incentive to provide better care and support to older people.

   "Possession of property by elderly people is a boon for them! I believe that possessing all the property of an older person is important. My societal observation says that those elderly who have property with them are comparatively less deprived of care and support from family members than the elderly who do not have any property in their possession. Therefore, I wish all the elderly must keep all their property till their last breath" (M, 70 years old).

5. **Self-reliant and independent life** is always good and appreciated. However, dependency of either kind, physical or/and financial, is found to be depressing and disgusting, less approved and appreciated in society. The level of dependency of the elderly will be equally translated into a burden on family caregivers, which has a depressive outcome (Khan, *et al.,* 2016; Khare, *et al.,* 2016). It was observed from the field that older people's dependency on family members negatively impacts their relationship with family members and impacts the quality of care and support provided to older people in the long run. Table 2 shows that 48.73 percent of respondents

believed that older people must try to be less dependent on family members.

"As you know, dependency is not a good idea! Dependency on either physical or financial means is quite embarrassing, disgusting, and painful. Higher dependency on others sometimes becomes an unfortunate source of friction and abuse. Therefore, I think and try to be less dependent as much as possible and do all personal work on my own" (F, 70 years old).

6. **Active participation and involvement in family matters :** Elderly parents who are healthy and actively participate in everyday household chores tend to have a positive image in the family. Older females help their daughters-in-law in the kitchen, while older males engage grandchildren in play and learning activities. Other household chores may be considered a better way to contribute to the family and reciprocate the care services they receive from family members. The mutual exchange of services has a pleasing impact, encouraging family caregivers to provide appropriate care and support to older adults. Therefore, it is better to be a contributor than an idle consumer. As Table 2 shows, this idea was favored by 43.65 percent of elderly respondents.

   "Oh! Nothing is free in this world! For everything, someone must pay! So, it is better to repay or compensate for whatever you get from your family members, directly or indirectly. For instance, try to do light household chores daily that you can easily do. In the case of women, try to help your daughters-in-law in kitchen work; help family members rearing and caring for the grandchildren" (F, 65 years old).

7. **Social and emotional resilience :** Emotional resilience is a prerequisite for a dignified life. In order to enjoy a quality

and respectful life in old age, older adults need to be socially and emotionally more robust and healthier to tackle all the odds and untoward situations in later life. Table 2 reveals that 49.75 percent of older adults suggested to future generations of elderly to keep themselves socially and emotionally more robust, which is necessary to achieve a better life in old age.

"Older people are supposed to be socially and emotionally strong enough to deal with life challenges. If you are not ready for that, you cannot bear the painful loss of a spouse or loved one. That turns your life into a living hell! You cannot enjoy your life; you feel suffocated every moment. So elderly people must be socially and emotionally strong to better deal with untoward situations in old age" (M, 72 years old).

8. **Facilitate a healthy family environment and provide quality education for children :** Parents play an essential role in developing moral concepts throughout childhood and adolescence (Smetana, 1999). "Children firstly acquire values and good traits at home; that is, character education begins at home, and the parents are their first teachers" (Yaþaroðlu, 2016, p. 70). It is a well-acknowledged fact that when a child is born, he is ignorant of all the worldly realities. What and how to do things they first learn from family, neighbourhood, and society. In the family, they mostly learn from their parents. Children see and do most of what their parents teach or direct, as children spend most of their time with them. As a result, the role that parents play is crucial. They should play a crucial role in their child's thinking and thought process. Suppose the parents are well-behaved with their older parents; the minds of young children are more likely to get influenced, which would be reflected in their behaviour in the long run. Furthermore, quality education, proper guidance, and a healthy lifestyle

are essential to grooming children into good sons or daughters, family members, and parents in the future. Table 2 shows that 75.13 percent of respondents suggested that an individual needs to provide a proper family environment and quality education to their children, making them learn moral values essential to a better life in old age.

"I have provided quality education to my children that allows them to get exposure to morally sound living, which in turn helped them excel in their job and become an aware and responsible child in the family. Besides education, our thinking and lives were crucial in shaping their views and personalities. My son is an engineer by profession. He is quite sensitive to our emotional needs, too. He looks after us with extraordinary care and cares for his toddlers" (M, 73).

9. **Lead a life filled with morality and values to inculcate humility and self-respect :** It is well said by 'Alice Sterling Honig' that "family is the first school for young children; parents are powerful models" (Honig, n.d.). Young children learn a lot from the lives of their parents. They learn from every good and evil act of their parents, which is equally reflected in their behaviour and attitude in the long run. If the parents are humble and respectful to their parents and others, the same will be expected of their children equally. Table 2 shows that 84.26 percent of respondents approve that the values in a parent's life, such as humility and respect, will be helpful to inculcate these qualities in children, which is essential for achieving a favourable environment for the elderly to live with their children peacefully.

"I believe that our children are the real successors of our character! They learn everything from us! What do they think? What do they do? How do they behave? That is somehow an aggregate reflection of our entire life course. What we have demonstrated in our lives and

character can be easily acknowledged from our acts, behaviour, and character. So, an individual, as a parent, while upbringing their kids, must possess a humanising quality of life. For instance, humility, honesty, and respect towards parents and others will help them inculcate these qualities in their personality that may benefit their family and society" (M, 73 years old).

10. **Inculcation of the value of caring for elderly parents :** Caregiving for frail elderly parents is an exhausting task that is not easy for everyone. It is difficult for adult children or family members to take care of their elderly parents until and unless they have strong religious beliefs or material motivation. As rewards and punishment influenced the human mind, they were provisioned and existed in the religion in Hell and Heaven. Religion tells us what we will get in reward for our sacrifices in caring for our parents and the magnitude of punishment in case we fail to do so. As per the religious doctrines, whoever is a believer, following the religious teachings and commandments and doing good deeds will help us enter heaven after death. This teaching and religious notion is a driving force that motivates children and family members to care for their elderly parents. The findings of the studies revealed that a practicing religious person is more likely to provide care and support to elderly parents (Gans, *et al.*, 2009; Bensaid & Grine, 2014). Table 2 shows that 64.97 percent of respondents believe that providing the basics of religious teaching and inculcating the significance of caring for elderly parents among young children is essential.

"My religious teaching says that the father is the gate of paradise and that paradise is beneath the mother's feet. Here, it is clear that you cannot bypass them while entering paradise, meaning the children must attain the joy of their parents. To achieve the happiness and joy

of the parents, one must take care of them properly. As a believer, I strongly believe in religious doctrines, which helped me take care of my older parents. Moreover, I think this belief system will help my adult children bear the pain of sacrifice (if any) in providing care and support to me in my old age." (M, 65 years old).

11. **Maintenance of a cordial family atmosphere :** Decent behaviour from the elderly is necessary, and a peaceful environment in the family is desired, which helps to maintain cordial relationships among family members. At the same time, abusive and improper behaviour by the elderly may lead to a conflicting situation in the family and undermine the possibility of extending proper family care and support for elderly people. 67 percent of the elderly accept that while living with family members, older adults must demonstrate proper behaviour with the younger generation, which is essential for peaceful co-residence.

    "I believe! What you give to others will return to you in the same proportion—good or bad! The reward will be pleasing and joyful if your conduct and behaviour are appropriate and sound. Otherwise, you must bear the pain and bitterness of your actions and have no way to escape but to face it. I have learned proper behaviour from the very beginning of my adulthood. I behave properly with my parents, children, and family members. Now the same traits can be acknowledged in my adult children" (F, 68).

    "I am quite an unfortunate lady! My husband was an alcoholic. He used to abuse me and beat my children and me whenever he wanted. He died last year due to kidney failure. My children have learned all the unhealthy habits from my husband. Now, my children drink and take other addictive substances. They abused their wives and children in the same way their father

used to do with me. While they are drunk, they hardly distinguish between wife and showing abusive behaviour" (F, 65).

12. **Family members are equal stakeholders :** Of course! It is unnatural to have equal affection and attachment for every family member; somewhat, this inevitably varies from person to person. In many cases, it was observed that older adults accepted that affectionately, they were unequally attached to different family members. Their little affection and attachment to a particular son, daughter, or daughter-in-law are assumed to be a privilege for them in many matters. Financial support and other favours may be perceived while distributing family property. Sometimes, excessive and unnecessary attachment to a family member over others becomes irritating and unacceptable to most of the family members, which causes conflict among family members. This negatively affects the very relationships of family members with other family members and elderly parents. Sometimes, this situation continues to escalate to the level of abuse and neglect with older adults. Table 2 shows that 51.26 percent of older adults have suggested that considering every family member as an equal stakeholder is a crucial strategy for a better old-age life.

    "I think every person in the family is equally important. However, they may be different in age. Someone may be older, and someone may be younger. Being younger in the family does not mean they are less important, and their voice and concerns can be ignored. To counter bias, as the head of the family, I heard everyone equally, and before making any major family decision, I tried to get a view of all the family members irrespective of their age and sex" (M, 70).

13. **Consider the differences in views of family members:** Primarily in Indian society, male older adults are inevitably

found to express their power as the patriarchal head of the family. They sometimes believe that their decision is accurate and correct and is above all things in the family and for their family members. That mindset creates a rebellious tendency among family members, creating chaos and unending conflict. Therefore, it is necessary to consider every family member as an equal part of the family, and they have full right to raise their concern, express their views and choices, and participate in family decision-making. Table 2 shows that 43.15 percent of older adults suggested considering the differences in views of family members as a critical strategy for a better life in old age.

"We never expect the same views and choices from every person in the family. Everyone has different views and choices based on their exposure and experience, which is not wrong! I am a flexible person! I always give space to different views and respect the differences in choice. I have never imposed my views and choices on others. This helped me to lead a happy family life in my old age. However, many elderly spoil their liveswith their rigid behaviours, I think that must be avoided" (F, 70).

14. **Try to be less complaining, less interfering, and not abusive :** Usually, the elderly, as head of the family, keep complaining and interfering in the matters of others in the family. Whenever they feel that some family member is misbehaving, they try to intervene; sometimes, they become aggressive and abusive in the correction process, leading to quarrels and undermining a friendly and caring environment for older adults. Hence, the elderly must be careful while correcting their family members for their faults and evil deeds. They act politely and avoid being rude while dealing with family members. Table 2 indicates that 48.73 percent of respondents suggested that elderly people

should be less complaining, less interfering, and not being abused as a critical strategy for a better life in old age.

"Son! I have lived my life, and now it is time for our children to enjoy and live their lives. I believe in freedom and allow my children to live according to their choices. They are educated and smart enough to make good decisions in their lives. Restrictions, complaints, and a lack of trust are the common sources of all conflicts in the family. So, I tried to be less interfering and less complaining. I know many of my age in my neighbourhood who have a habit of complaining to everyone and aggressively interfering in other matters in the family are quite unhappy and facing many waves of abuse in the family daily" (M, 80 years old).

15. **Avoid authoritarianism :** Being the family's patriarchal head, older male adults usually try to assert their power and authority while delegating their decisions in family matters. They influence the lives of family members through their typically unchanging final decisions, which all family members are supposed to follow as it is. In that condition, family members feel subjugated and suffocated, gradually becoming rebellious and defying their decisions and guidance, which turns a peaceful family into a battleground. Such a family environment is not favourable for providing proper care and support for older adults. Table 2 shows that 64.46 percent of elderly respondents suggested saying no to authoritarianism.

"Son! Authoritarianism is a kind of addiction to power! It is quite a bad thing to have! No one likes this behaviour, i.e., showing power and control! Rather, love and affection are better tools to get due respect. If anyone wants genuine respect, I advise them to say no to authoritarianism. It is quite harmful to all relationships.

It becomes disastrous when it creeps into family relationships. I believe those elderly people who want proper care and support from their family members are supposed to say no to their authoritarian behaviour" (M, 73 years old).

Discussion

This paper deals with humans' inevitable phase of life called old age. Life is full of contingencies in the form of deaths in any life phase, from infancy to old age. Old age is characterised by a loss of physical strength, which is not to return but only to deteriorate with the advancing stage of life, followed by death, which is an inevitable pain that every soul must experience. In India, from time immemorial, elderly members of the family were cared for with great worth and dignity in traditional families. The habit of care and responsibility inculcated in me can be traced to my religious beliefs, as India is predominantly a theistic society, irrespective of what faith one believes.

Increasing urbanisation resulted in an increase in nuclear families, which severely affected the possibility of care and support for older family members. With the increase in inflation, ever-increasing materialism, small family sizes, and the impact of cultural westernisation, India is witnessing an increasing number of old-age homes, particularly in metropolitan cities across India. This development goes against the ethos of an ideal Indian family system where the family has taken extraordinary importance in fostering care and support for dependent family members, especially for the care of older parents. Initially, in the formal sector, where having retirement pension schemes was reasonably good, owing to privatisation and the shrinking of government jobs, old age pensions are limited to very few people.

Additionally, due to the poor market-oriented and earning skills of the Indian populace, most elderly people are linked to income loss, which in turn adds adversaries to an already stressed life. The findings of the study suggest better and more adequate financial

planning before we age to address the financial problem in later stages of life.

For the last two to three decades, old age issues have appeared profoundly owing to a sea change in families globally and cultural globalisation, more precisely westernisation. Indian society has witnessed the change, which is not incredibly positive for Indian culture. Being a religious society, Indians do have extraordinary respect, care, and support for their elderly under the vibrant family system. However, increasing urbanisation and semi-urban settlement worsened the issues, and older people became the focal point of every household discussion. Provided this, the paper tried here to understand the possible strategies that esteemed elderly people may try to have a better and more respectful life in old age. This qualitative paper thematically tries to categorise fifteen themes (read strategies) through face-to-face structured interviews. A total of one hundred ninety-seven esteemed elderly were considered to understand the strategies for old-age adjustment.

A relatively large number of twenty-nine elderly members thought one must be physically and mentally sound to deal with the old-age issues. This eases the caring family; otherwise, old age with more health issues makes caring for family members worrisome. Health is wealth, a very relevant proverb to ensure a better old age. Health issues further add to medical expenses, and the elderly with limited financial resources are usually stressed by deteriorating health conditions. Planning for financial independence was another option that esteemed respondents chose to ensure respect in old age. Respondents thought financial security was beneficial for attaining self-worth and dignity later in life. In contemporary society, family caregivers are more observant of the financial self-reliance of the elderly. Sometimes, elderly members are found to be financially strong, having a good income that is enough to fulfill the needs of all family members and ensure the financial stability of the whole family as well. This financial privilege attracts family caregivers to provide better care and support to the elderly in the increasingly materialistic world. About

forty percent of the respondents supported the idea of debt-free retirement, which is inevitably a prerequisite to enjoying joyful days in old age. Financial debt is something terrifying for mental peace; it derails every aspect of life and, more importantly, creates embarrassing moments in social life. Old-age life, complicated by debt, frustrates the caring family member. Provided this, the elderly are believed to be debt-free in retirement to have a respectful life.

Owning property was another possible and profound strategy for ensuring a respectful old age. Increasing real estate prices add further to the much-needed financial self-reliance of the elderly. This ensures increased respect from caring members towards the elderly. This adds to the prospects of a self-reliant life for senior citizens. Respect and worth for any individual in the family are usually ensured by their participation and contribution to the family. This ensures worth among the family, provided this sizeable number of respondents—eighty-six elderly—believed that they wanted active participation and consideration among their concerned family. In the family, elderly people often face many unpleasant behaviours from family members, even from young ones, including comments, taunts, and mimics, which require strong emotional resilience to cope with.

Another critical issue discussed during interviews was young children's excellent and cultured upbringing to imbibe the idea of respecting the elderly. This kind of acculturation is even inculcated through religious and spiritual indoctrination. A more powerful argument for respectful elderly care is the inculcation of human values cherished in Indian theistic belief. Around eighty-four percent of elderly respondents believed family grooming ensures that the upcoming generation cares for aged parents. It is a strong and genuine argument that the institution's family needs to ensure the care and support of elderly people. As old age is an essential phase of an Indian's life cycle where it is a highly revered and virtuous religious act, owing to high professionalism in every aspect of life, this training is declining, and there is an increasing trend of old-age homes, particularly in metropolitan India. A substantial chunk of the Indian population finds

it a degradation of rich Indian joint family traditions; shrinking family size further adds to the suffering, though to its benefits.

In order to cope with elderly issues and have a respectful life in old age, they think that it must be ensured that they will be accommodated without any high demands from the significant others among the caregiving family members. A cordial relationship is of utmost importance for elderly accommodation. The significance of equal importance must be imbibed in the family system to ensure better adjustment of the elderly with all family members. By default, this phase of life is assigned to every soul and needs to be taken care of with the utmost care. Differences of opinion must always be acceptable and dealt with appropriately. Along with this, many elderly people opined that one efficient coping strategy is to be less demanding; either one must be frugal to the maximum extent possible. This age phase also calls for giving up an authoritarian attitude, which is not very pleasant for younger ones to deal with.

In Indian academia, the growing discourse on elderly issues reflects the need for family systems to adapt strategies incorporating religious and cultural values. This ensures that future generations stay receptive to accommodating their elderly relatives despite cultural shifts and materialism. Integrating tradition with changing dynamics is crucial to supporting familial bonds and upholding cherished values in an evolving society.

Conclusion

This study briefly describes the overall conditions of the senior population, providing a basis for community-based interventions and informed policymaking. Comprehending the complex facets of their existence is essential to creating customised initiatives that cater to their distinctive requirements, guaranteeing an honourable and encouraging atmosphere for senior citizens in our community.In India, most older adults live with family members later in life. Usually, co-residence with family members is the most common and preferred living arrangement among older adults. However, many

familial and societal changes have occurred over the past few decades, significantly altering the familial environment and structure and adversely affecting the quality of care provided to older adults. People are becoming more materialistic and individualistic rather than socialistic and spiritualistic. In so many cases, older adults had to face a variety of abuse from their family members that further extended up to the level of neglect. The contemporary situation demands plausible plans and strategies that need to be adopted by the ageing population to avoid suffering and attain a better life in old age.

*The data collected for this study was from a more extensive research titled "Family Care and Support to the Elderly People: A Study of Urban Aligarh, Uttar Pradesh."

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Factors Affecting Mental Health Among Slum and Non-Slum Elderly During COVID-19

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ABSTRACT

The study's objective was to determine the predictors that affect the mental health of the 250 elderly living in slums (N=100, 59 males and 41 females) and non-slum areas (N=150, 75 males and 75 females) in Dhaka city of Bangladesh, selected by random sampling. The Geriatric Depression Scale (GDS) was used to assess their mental health. The Chi-square test and Logistic regression model were used for data analysis. The Chi-square test showed that the psychological stress of the elderly is significantly associated with their age, education, income, and marital status in both slum and non-slum areas. The logistic regression analysis shows that income, diabetes, and physical exercise are the most influential psychological stress factors in the elderly. The elderly living in slum areas are more likely

to experience psychological stress than non-slum areas. Therefore, necessary steps should be taken to improve the mental health of the elderlye specially those living in slum areas of the country.

Keywords : Elderly, Depression, Occupation, Slum

The quality of life can influence the mental health of the elderly. The improvement of quality of life can reduce the mental and emotional disorders of the elderly. Easy and quick access to healthcare service facilities may support the improvement of the mental health condition of the elderly (Hany, 2019).

Depression is one of the most common illnesses present in older adults. Current estimates indicate that on average 18 percent of older adults experience significant depressive symptoms (Weeks *et al.*, 2003). The elderly people need better medical care. A comprehensive study was needed to explore the exact status of the elderly, their needs, and proper recommendations for their well-being (Uddin, *et al.*, 2010). Studying the prevalence and determinants of psychological stress among the elderly may help stakeholders to develop comprehensive interventions to manage psychological distress. The elderly can cope with anxiety through awareness, consultation, and education programmes related to mental health (Fadila, *et al.*, 2021). Coronavirus disease (COVID-19), was emerged in Wuhan city, China in December 2019 (Li, *et al.*, 2020) and COVID-19 was confirmed to have reached in Bangladesh March 8, 2020 (Satu, *et al.*, 2020).

A recent study found that about 58 percent of elderly people in Bangladesh suffer from psychological stress. Females were more prone to psychological stress than males. Poor elderly suffer more than middle-and high-income elderly. The oldest elderly suffer more than the young elderly. So, necessary steps should be taken to reduce the psychological stress of the elderly (Uddin, *et al.*, 2019).

The elderly were at a higher risk of fatal diseases during COVID-19. The national and international community is very

concerned about the aged population of their countries. Hence, the global recommendation for older populations is to maintain hygiene and infection control standards and limit social contact through social distancing and staying at home (Brooke & Jackson, 2020).

The COVID-19 pandemic caused mental health suffering throughout the entire world, and Bangladesh was no exception. However, there was a lack of studies assessing COVID-19-related human stress and its associations with other relevant factors affecting the quality of life of people in the country (Islam *et al.,* 2020).

The government of Bangladesh has implemented some policies to improve the quality of life of the elderly, but geriatric problems are still ignored in medical education and the profession. A high prevalence of psychological stress is a common feature among the elderly, and they need support and care from Government and NGOs. Therefore, the objective of the present study was to identify the influential predictors that affect the mental health of the elderly living in slum and non-slum areas in Bangladesh.

Method

The empirical data of the present study was collected from 250 randomly selected respondents in both slum and non-slum areas of Dhaka city in Bangladesh. The age of respondents varied from 60 years and above. For detailed information about the sample, see Table No. 1 given below:

Table 1

Socio-Demographic Characteristics of the Elderly

Characteristics		Slum	Non-Slum	Total
		n (%)	n (%)	n (%)
Age	60-69	32(32)	21(14)	53(21.2)
	70-79	48(48)	73(48.7)	121(48.4)
	80 & above	20(20)	56(37.3)	76(30.4)
Sex	Male	59(59)	75(75)	134(53.6)
	Female	41(41)	75(50)	116(46.4)

Religion	Muslim	97(97)	113(73.3)	210(84)
	Hindu	2(2)	30(20)	32(12.8)
	Others	1(1)	7(4.7)	8(3.2)
Marital Status	Married	91(91)	125(83.3)	216(86.4)
	Unmarried	0(0)	3(2)	3(1.2)
	Widow	9(9)	21(14)	30(12)
	Divorce	0(0)	1(0.7)	1(0.4)
Education	Illiterate	76(76)	20(13.3)	98(38.4)
	Primary	24(24)	36(24)	60(24)
	SSC	0(0)	26(17.3)	26(10.4)
	HSC	0(0)	25(16.7)	25(10)
	Graduate and above	0(0)	43(28.7)	43(17.2)
Income Source	Employed	90(90)	44(29.3)	134(53.6)
	Not employed	10(10)	79(52.7)	89(35.6)
	Business	0(0)	27(18)	27(10.8)
Income	Poor	81(81)	83(55.3)	164(65.6)
	Middle Class	19(19)	43(28.7)	62(24.8)
	Rich	0(0)	24(16)	24(9.6)
Family Type	Nuclear	61(61)	74(49.3)	135(54)
	Joint	39(39)	76(50.7)	115(46)

Tools used

The Geriatric Depression Scale (GDS) short form, was used to identify the level of psychological stress of the elderly. The GDS is a self-report measure of depression in older adults. Users respond in a 'Yes/No' format. The short form of GDS-S comprises 15 items and was chosen from the Geriatric Depression Scale-Long Form (GDS-L). These 15 items were chosen because of their high correlation with depressive symptoms in previous validation studies (Sheikh &Yesavage, 1986).

A structured questionnaire was also administered individually to collect the required information from the respondents.

Different descriptive statistical tools along with the Chi-square test and Logistic regression model were used in the analysis of data.

Results and Discussion

Mental health status of elderly in slum and non-slum areas by GDS

It was observed that 43.6 percent elderly were suffering from depression, 38.0 percent elderly were suffering from severe depression, and only 18.4 percent had no depressive symptoms. So, overall 81.6 percent of elderly were suffering from mild and severe psychological stress which implies that about every four out of five elderly were suffering from some psychological stress during COVID-19 in Bangladesh (Figure 1). It was noted from a study that 58.2 percent of the elderly were suffering from psychological stress before COVID-19 (Uddin *et al.*, 2019) which implies that about every three out of five elderly were suffering from some psychological stress. It may be concluded that psychological stress among the elderly increased during COVID-19 compared to the non-COVID-19 period in Bangladesh.

A study conducted in Egypt showed that 60.1percent and 31.0 percent of older adults were suffering from mild and severe psychological stress during COVID-19 (Fadila, *et al.*, 2020). Another survey conducted in Italy revealed that more than one-third of older adults were suffering from anxiety during the COVID-19 outbreak (Crosta *et al.*, 2020). Another survey conducted in China showed that 37.1percent of the elderly suffered from depression and anxiety associated with COVID-19 (Meng *et al.*, 20)

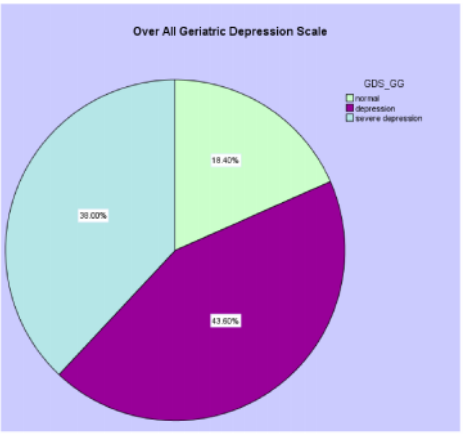

Figure 1 : *Mental health status of the elderly by GDS*

It was observed that 46 percent of slum elderly and 42 percent of non-slum elderly were suffering from depression. Again for the slum area, 46 percent were suffering from severe depression, and for the non-slum area, it is 32.7 percent. So, it is clear that more slum elderly were suffering from mild and severe depression compared to non-slum elderly (Figure 2).

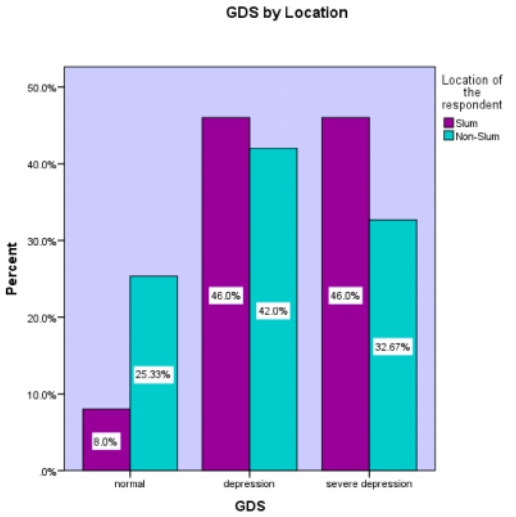

Figure 2 : *Mental Status of Elderly according to Location by GDS*

Associations of mental health with the selected socio-demographic variables

Table 2 presents the associations of mental health status (GDS) with socio-demographic variables. Age is significantly associated with the mental health status of the elderly in both slum and non-slum areas. The oldest elderly suffered more than the young elderly. So, age is an important factor that influences the mental health status of the elderly.

It is noted that educational status is significantly associated with the mental health of the elderly. Depression among illiterate elderly was higher than that of literate elderly. It was also observed that there was a significant association between mental health status and gender in non-slum areas. However, there was no significant association

between them in the case of slum areas. The findings show that marital status is significantly associated with the mental health of the elderly for both slum and non-slum elderly. Married elderly were suffering less than widows and divorced elderly. It was found that the mental health of the elderly is significantly associated with their occupation in the elderly living in both slum and non-slum areas. The employed elderly suffered less than theunemployed elderly.

It was observed that the mental health status of the elderly was significantly associated with their income in both slum and non-slum areas. The level of depression of the poor elderly was higher than that of the rich elderly (Table 2).

Wahlin *et al*.,(2015) found that women were more vulnerable to depressive symptoms (54%) than men (34%), which is opposite to the present study. The present study shows that 49.3 per cent of male elderly and 34.7 of female elderly were suffering from depression in slum areas. But another study(Sanjoy, *et al.*, 2014), depicted that males were more depressed than female elderly. These findings are similar to the present study.

Visal, *et al.*,(2010) observed that illiterates had a much lower rate of depression than literate respondents, these findings do not corroborate present findings. In the present study illiterate elderly were suffering more than literate elderly.

The prevalence of depression was found to be significantly higher in the elderly who were single (never married), widowed, divorced, or separated. Marital status was a risk factor for depression in the elderly (Beekman, *et al.*, 1995; Jones, *et al.*, 2003) which supports the present study. The present study shows that marital status is significantly associated with the mental health of the elderly and married elderly are suffering less than widow and divorced elderly.

A study conducted in Egypt during COVID-19 found a high prevalence of mild-to-severe psychological stress among the elderly population. The prevalence of distress was significantly higher among the elderly whose ages were greater than 70 years,

those living in rural areas, those living alone, those with comorbidities, those who rated their health status as poor, and those who were watching negative news (Fadila,*et al.*, 2021). The present study also shows a significantly higher severe psychological stress among the elderly whose age is greater than or equal to 70 years.

Table 2

Association of mental health of elderly with selected socio-demographic variables

Variables		Slum				Non-Slum			
		Normal	Depression	Severe Depression	P-Value	Normal	Depression	Severe Depression	P-value
Age	60-69	5 (15.6)	22 (68.8)	5 (15.6)	.000	10 (47.6)	9 (42.9)	2 (9.5)	.001
	79-79	3 (6.2)	23 (47.9)	22 (45.8)		22 (30.1)	31 (42.5)	20 (27.4)	
	80 & Above	0 (0)	1 (5)	19 (95)		6 (10.7)	23 (41.1)	27 (48.2)	
Gender	Male	5 (8.5)	26 (44.1)	28 (47.8)	.952	24 (32)	37 (49.3)	14 (18.7)	.001
	Female	3 (7.3)	26 (44.1)	18 (43.9)		14 (18.7)	26 (34.7)	35 (46.7)	
Religion	Muslim	8 (8.2)	44 (45.4)	45 (46.4)	1.00	29 (25.7)	49 (43.4)	35 (31)	.741
	Others	0 (0)	2 (66.7)	1 (33.3)		9 (24.3)	14 (37.8)	14 (37.8)	
Marital Status	Married	8 (8.8)	45 (49.5)	38 (41.8)	.034	36 (28.8)	58 (46.4)	31 (24.8)	.000
	Others	0 (0)	1 (11.1)	8 (88.9)		2 (8)	5 (25)	13 (65)	

Education	Illiterate	3 (3.9)	29 (38.2)	44 (57.9)	.000	2 (10)	5 (25)	13 (65)	.007
	Literate	5 (20.8)	17 (70.8)	2 (8.3)		38 (27.7)	58 (44.6)	36 (27.7)	
Occupation	Employed	8 (8.9)	45 (50)	37 (41.1)	.014	33 (46.5)	31 (43.7)	7 (9.9)	.000
	Un-employed	0 (0)	1 (10)	9 (90)		5 (6.3)	32 (40.5)	42 (53.2)	
Income	0-20000	5 (6.2)	33 (40.7)	43 (53.1)	.008	5 (6)	36 (43.4)	42 50.6)	.000
	21000 & Above	3 (15.8)	13 (68.4)	3 (15.8)		33 (49.3)	27 (40.3)	7 (10.4)	
Family Type	Nuclear	6 (9.8)	32 (52.5)	23 (59)	.123	14 (18.4)	33 (43.4)	29 (38.2)	.117
	Joint	2 (5.1)	14 (35.9)	23 (59)		14 (18.4)	33 (43.4)	29 (38.2)	

Effects of socio-demographic characteristics on mental health of the elderly

The result of the logistic regression analysis of the selected socio-demographic characteristics on the mental health of the elderly is represented in Table 3. The study reveals that non-slum elderly are 0.449 times less likely to be depressed than slum elderly. Again, male elderly are 1.821 times more likely to be depressed than female elderly. According to the study, the married elderly are 0.330 times less likely to be depressed than widows divorced, or separated elderly. The study shows that literate elderly are 0.343 times less likely to be depressed than illiterate elderly. Employed elderly are 0.328 times less likely to be depressed than unemployed elderly. It is clear from the study that, elderly with low income are 3.419 times more likely to be depressed than elderly with high income. It is observed that the elderly who do

not do physical exercise regularly are 5.027 times more likely to be depressed than those who do physical exercise. The elderly with no diabetes are 0.259 times less likely to be depressed than the elderly with diabetes. Again, the study makes it clear that the elderly who have no sleeping problems are 0.674 times less likely to be depressed than the elderly who have sleeping problems. The study suggests that income, diabetes, and physical exercise are significant factors in the mental health of the elderly (Table 3).

A study conducted in Italy showed that the elderly with higher education levels had lower levels of psychological distress than the elderly with lower education status (Crosta, *et al.*, 2020). This implies that literate people suffer less from anxiety than illiterate people. Our study is similar to the study conducted in Italy because literate elderly are less likely to be depressed than illiterate elderly in Bangladesh.

The findings of the present study showed that the elderly with poor economic conditions had a higher level of psychological stress than those with good economic conditions. Married elderly had a lower risk of distress than unmarried elderly. The present study supports the findings of the report which concluded that a lack of a major social support system was related to psychological distress (Wang, *et al.*, 2020).

It is found from the present study that the elderly who do not suffer from diabetes and sleep disorders have less likelihood to suffer psychological stress than the elderly who suffer from health-related problems such as diabetes and sleep. Similar findings are observed in other studies that the presence of chronic illness and poor health are associated with increased psychological stress (Ho, *et al.*, 2019; Wang, *et al.*, 2020).

Table 3

Effects of socio-demographic characteristics on mental health of the elderly

Characteristics		β	Sig.	Exp (β)	95% CI for Exp (β)	
					Upper	Lower
Constant		3.774	0.042	43.566		
Location	Slum ®					
	Non-Slum	-0.801	0.244	0.449	0.117	1.729
Gender	Male	0.599	0.235	1.821	0.677	4.899
	Female ®					
Marital Status	Married	-1.108	0.239	0.330	0.052	2.092
	Others ®					
Education	Illiterate®					
	Literate	-1.071	0.110	0.343	0.092	1.274
Occupation	Employed	-1.115	0.198	0.328	0.060	1.793
	Unemployed®					
Monthly Income	0-20000Tk.	1.229	0.102	3.419	0.783	14.918
	21000Tk.& Above ®					
Physical Exercise	Regular ®					
	Not regular	1.615	0.003	5.027	1.734	14.572
Diabetes	No	-1.352	0.038	0.259	0.072	0.928
	Yes ®					
Sleeping Problem	No	-1.394	0.365	0.674	0.287	1.583
	Yes ®					

Conclusion

Physical health sometimes depends on mental health. Most people are suffering from psychological stress in the last stage of their life. The findings of the study show that age, income, education, and

physical exercise are significant factors in the mental health of the elderly in slum and non-slum areas during COVID-19. The slum elderly are more vulnerable to the risk of psychological stress than the non-slum elderly. So special care is needed to reduce the stress of slum elderly in Dhaka city of Bangladesh. Since the study is conducted in a limited area of the country (Dhaka city) with a relatively small sample size, the findings of the study may not represent the actual scenario of psychological stress of the elderly in the whole country. Further, a large-scale survey may be recommended to get the real scenario of psychological stress among the elderly in the country.

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Levels of Perceived Social Support and Anxiety Symptoms in the Elderly in Old Age Homes: A Studyin Chennai City

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ABSTRACT

The objectives of the study were to assess the existence of a correlation between levels of perceived social support and severity of anxiety symptoms in 73 elderly inmates, 33 males and 40 females,above the age of 65, of old age homes in Chennai. The Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) and Geriatric Anxiety Scale – 10 (Mueller et al., 2015) were administered to measure social support and anxiety. Descriptive statistics, Pearson's correlation, significance tests, and regression analysis were used to analyse the data. Results revealed that the levels of perceived social support and severity of anxiety symptoms were negatively/inversely correlated (r = -.395, p = <.001). Significant gender differences in the levels of perceived social support were found, but gender differences in these verity of anxiety symptoms were not

noticed. Based on the present findings, it may be concluded that the more an elderly individual perceives themselves to have good social support, the less intense anxiety symptoms they experience.

Keywords : Perceived Social Support, Social support, Anxiety, Geriatric population, Elderly.

Perceived social support and anxiety are two critical factors that can impact the mental health and well-being of the elderly population. Perceived social support refers to perceptions of social support adequacy from three specific sources: family, friends, and significant others. (Zimet, *et al.,* 1988). Anxiety, on the other hand, is defined as excessive worry and apprehensive expectations, occurring more days than not for at least six months, about some events or activities, such as work or school performance (APA 2022).

This study contributes to the existing body of knowledge by highlighting the unique role of perceived social support in the mental health and well-being of the elderly. As individuals age, they undergo significant changes in their social networks and support systems, which can have profound effects on their mental and emotional health. Our research, in line with previous studies, found that older adults who perceive more excellent social support tend to have better mental and physical health outcomes, including a reduced risk of depression, anxiety, cognitive decline, and physical illness. Perceived social support can provide a sense of belonging, self-worth, and validation, which can help reduce the adverse effects of stress and increase resilience in the elderly.

Perceived social support refers to an individual's *subjective* perception or belief about the availability and effectiveness of social support from others. Received social support, conversely, refers to the tangible support an individual receives from their social network. So why measure perceived social support and not received social support? Perceived social support is claimed to be more persistently

and powerfully related to health and well-being than received social support (Patil, *et al.*, 2014).

As individuals age, they may experience losses in social networks, and this can lead to a sense of loneliness and social disconnection, which can have negative impacts on mental and physical health outcomes. Social isolation has been linked to a higher risk of depression, anxiety, cognitive decline, and mortality in the elderly (Cacioppo & Hawkley, 2009).

Anxiety is a common mental health condition that affects people of all ages, including the elderly. It has a significant impact on the mental and physical health of the elderly, leading to decreased quality of life, increased disability, and increased risk of mortality. Social isolation and loneliness are some of the major contributors to anxiety in the elderly, as individuals may feel disconnected from their support systems and experience feelings of helplessness and hopelessness (Hwang, *et al.*, 2020). Anxiety is often underdiagnosed and undertreated in the elderly population,mainly due to the stigma surrounding mental health issues.

The relationship between perceived social support and anxiety in the elderly has been extensively studied, and research has consistently shown that higher levels of perceived social support are associated with lower levels of anxiety in this population. Healthcare professionals and caregivers should recognize the importance of social support in managing anxiety in the elderly. They should work to foster strong social networks and support systems for this population. By doing so, they can help to improve the mental and physical health of the elderly and enhance the overall quality of life.

Researchers have shown that there is a significant relationship between perceived social support and anxiety in elderly individuals. Elderly individuals who perceive a lack of social support or have low levels of social support are more likely to experience anxiety symptoms than those who feel supported by their social networks. A study of perceived and received social

support in elderly depressed patients showed that there was a significant negative correlation between perceived social support and depression and that the cognitive component of the latter influences the perception of social support and demands. (Patil *et al.,* 2014). A similar study has also proved that people with higher levels of perceived social support could buffer the adverse impact of depressive symptoms on life satisfaction (Malakar, *et al.,* 2017). To support this, another study reported that life satisfaction and perceived social support in elderly people were positively correlated (Prakash & Srivastava, 2020). Concurring with the previously mentioned studies, a survey of 1500+ elderly people focusing on their well-being during the COVID-19 pandemic concluded that social isolation and lack of social support were significant predictors of psychological distress. (Sujiv,*et al.,* 2022). However, it is essential to note that most of these studies are location-bound and had only a few hundred samples, sometimes even fewer.

The mental health and well-being of the elderly in India, especially after the COVID-19 pandemic, looks bleak. A study conducted by the Agewell Foundation in 2021 reports that 82.4 percent of the elderly complained of health anxiety due to COVID-19, and 63 percent have developed symptoms of depression due to social isolation and loneliness. Anxiety, sleeplessness, lack of appetite, and lack of physical activity were termed the most critical health challenges, according to 34 percent of respondents.

Another survey conducted by HelpAge India and published in 2022 shows that 51.9 percent believe love and care by children and grandchildren play a significant role in maintaining their good health. However, 79 percent of the respondents feel their family does not spend enough time with them. This raises a serious problem concerning the relationship between children/grandchildren and the elderly around them, as well as its impact on the latter's well-being and life satisfaction.

Objectives of the Study

1. To find out if there is any relation between the levels of perceived social support and severity of anxiety symptoms in the inmates of old age homes in Chennai.
2. To examine whether gender differences exist in the levels of perceived social support in the inmates ofold age homes in Chennai.
3. To examine whether gender differences exist in the severity of anxiety symptoms in the inmates of old age homes in Chennai.

Method

Sample

73 inmates, both males (N=33) and females(N=40) above the age of 65 years, residing in old age homes in Chennai, were selected by Convenience Sampling Method.

Tools used

The Multidimensional Scale of Perceived Social Support was developed by Zimet, *et al.*,(1988). The tool is a self-report measure consisting of 3 subscales: Significant Other Subscale, Family Subscale, and Friends Subscale. The ratings are summed, and mean scores from 1 to 2.9 are considered low support, 3 to 5 moderate support, and 5.1 to 7 high support. The overall reliability is .88, the test-retest reliability is .85, and the construct validity was proven by correlations between MSPSS and the Depression and Anxiety Subscales of HSCL($r = –.25$, $p < .01$). The minimum score that can be obtained is 1, and the maximum is 7. Scores are interpreted as either "Low Support" (1 – 2.9), "Moderate Support" (3 – 5), or "High Support" (5.1 – 7).

Geriatric Anxiety Scale – 10 (Mueller, *et al.*, 2015) is a short form of the original 30-item Geriatric Anxiety Scale developed by Segal, *et al.*, in 2010. The tool is a self-report measure consisting of 3 subscales: Somatic, Cognitive, and Affective. Higher scores

indicate more severe anxiety. The internal consistency was proven by a Cronbach's alpha of .89. The scale was significantly and positively correlated with the GAS total scale and subscales and was also significantly correlated with other scales (GDS, BAI, STAI, AMAS). The minimum score can be obtained is 1, and the maximum is 30. Scores are interpreted as either "Minimal" (1– 6), "Mild" (7 – 9), "Moderate" (10 – 11), or "Severe" (12 – 30). (Muller, *et al.,* 2015)

Procedure

These scales were administered individually. The researchers asked the respondents questions verbally and recorded their responses accordingly.

A structured interview schedule was used to collect demographic information from the respondents. where

Results and Discussion

Table 1

Descriptive Statistics of the Levels of Perceived Social Support and severity of Anxiety Symptoms in the Sample.

	N	Minimum	Maximum	Mean	Interpretation	Std. Deviation
MSPSS Overall	73	2	5	4.10	Moderate Support	.735
Family Subscale	73	1	7	5.69	High Support	1.58
Friends Subscale	73	1	7	5.61	High Support	1.40
Significant Other Subscale	73	1	1	1.00	Low Support	.000
GAS	73	1	10	4.89	Minimal	2.413

The overall mean score for PSS was 4.10 (SD = 0.735), indicating moderate perceived social support among the sample. The overall mean score for the severity of anxiety symptoms was 4.89 (SD = 2.413), indicating minimal levels of anxiety symptoms. The overall mean scores of the subscales revealed that the PSS from family (mean

= 5.69) and friends (mean = 5.61) were higher, and the scores of a significant other were low (mean = 1.00).

Table 2

Independent Sample t-test for levels of Perceived Social Support and severity of Anxiety Symptoms.

							Levene's Test for Equality of Variances		t-test for Equality of Means		
		Gender	N	Mean	S.D	Interpretation	F	Sig.	t	df	Sig. (2-sided p)
MSPSS SUBSCALES	Family	Male	33	5.19	.324	High Support	6.929	.010	-2.417	52.1	.019
		Female	40	6.10	.187	High Support					
	Friends	Male	33	5.45	.272	High Support	.868	.355	-.900	71	.371
		Female	40	5.74	.199	High Support					
	Significant Other	Male	33	1.00	.000	Low Support	-	-	-	-	-
		Female	40	1.00	000	Low Support					
MSPSS	Overall	Male	33	3.88	.804	Moderate Support	2.695	.089	-2.389	71	.020
		Female	40	4.28	.626	Moderate Support					
GAS		Male	33	4.64	2.29	Minimal	.311	.579	-.815	71	.418
		Female	40	5.10	2.52	Minimal					

There are significant differences (t (71) = -2.389, p = .020) in the PSS scores, with the mean score for Males (M = 3.88, SD = .804) being lower than the mean score of Females (M = 4.28, SD = .626). The magnitude of differences in the means is significant. The test on the Family Subscale showed that there are significant differences (t (52.1) = -2.417, p = .019) in the scores, with the mean score for Males (M = 5.19, SD = .324) being lower than the mean score of Females (M = 6.10, SD = .187). In contrast, theFriends Subscale test showed no significant differences (t (71) = -.900, p = .371).

One possible reason for this difference could be that elderly women are more likely to have more robust social networks and a greater willingness to seek out and receive emotional support from others (Litwin & Shiovitz-Ezra, 2010) in comparison to elderly men, who are more likely to rely on themselves and avoid seeking support from others (Fischer & Manstead, 2000). The results of the independent–sample t-test comparing the levels of Anxiety Symptoms

for Males and Females reported insignificant differences (t (71) = -.815, p = .418) in the scores for Males (M = 4.64, SD = 2.29) and Females (M = 5.10, SD = 2.52). The magnitude of the difference in the mean is tiny.

Table 3

Pearson's Correlation analysis between levels of Perceived Social Support (MSPSS) and severity of Anxiety Symptoms (GAS).

		Anxiety Symptoms
Perceived Social Support	Pearson Correlation	-.395**
	Sig. (2-tailed)	<.001

***. Correlation is significant at the 0.01 level (2-tailed)*

Pearson Product Correlation between Perceived Social Support (measured by MSPSS) and Levels of Anxiety Symptoms (measured by GAS) was found to have a statistically significant (r = -.395, p <.001) Low Negative correlation. This shows that an increase in perceived social support would lead to lower levels of anxiety symptoms.

Table 4

Regression Analysis for levels of Perceived Social Support (PSS) and severity of Anxiety Symptoms (GA).

Regression Weights	**Beta Coefficient**	**R^2**	**F**	**Sig. (p-value)**
PSS → GA	-1.296	.156	13.091	<.001

The dependent variable (anxiety symptoms, GA) was regressed on the predicting variable (perceived social support, PSS), which significantly predicted the latter (F = 13.091, p <.001). This indicates that perceived social support can play a significant role in shaping the severity of anxiety symptoms (b = -1.296, p<.001). Moreover, the R2 = .156 depicts that the model explains 15.6 percent of the variance in anxiety symptoms.

Conclusion and Suggestions

The study highlights the importance of several social and psychological factors that impact the elderly population's mental health (social isolation, sense of belonging, etc.). Though the present findings show moderate levels of perceived social support, increasing it to a higher level is still better. Thus, it is suggested that caregivers and family members should try to provide emotional and social support to older adults.

There is a need for policies and programmes that focus on improving social support, as well as mental health interventions that encourage social networking among older adults, such as social skills training, cognitive-behavioral therapy, support groups, etc., which could help reduce anxiety symptoms.Screening the elderly for anxiety symptoms and other mental health issues, especially if they report low levels of social support, could help identify individuals who may benefit from interventions that target anxiety symptoms.

Limitations of the Study

- The sample size was relatively small, and convenience sampling was employed. Thus, the results may not accurately representor effectively generalize to a much larger population.
- Since the study used a self-report measure of anxiety symptoms and not individuals with a clinical diagnosis, this may affect the accuracy.
- There may be other factors contributing to the level of anxiety symptoms which were not included in this study. Thus, further studies can focus on using probability sampling, including only diagnosed individuals, and studying other variables that may affect results.

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Death Anxiety and Social Support between Community and Institutionalized Older Persons

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ABSTRACT

The objective of the study was to assess the level of death anxiety and compare it with the level of perceived social support between institutionalized (N=60) and community-based older persons (N=60). Institutionalized elderly (18 males and 42 females) were compared with the community-based (24 males and 36 females) elderly on measures of Death anxiety (Templar's Death Anxiety Scale; DAS), cognitive functions (Mini-Mental Status Examination; MMSE) and Social support (Multi-dimensional Scale for Perceived Social Support; MPSS). The findings revealed that death anxiety was signi-ficantly more among elderly living in institutionalized set-ups (20.55 ± 5.62) as compared to community older persons (15.88 ± 4.97); however, the institutionalized older personsreported significantly poorer social support (4.50 ± 7.43). Compared to the older persons living in the community (3.12 ± 1.47). The correlation

between death anxiety and social support was found to be insignificant for both communities (r=0.63, p=.705) and their institutionalized counterpart (r=0.34, p=.799). Persons living in institutional setups exhibit a poor sense of social support in their lives and also exhibit higher death-related thoughts than their community counterparts.

Keywords : Death anxiety, Perceived social support, Institutionalized, Community-based older persons

As individuals age, they tend to become increasingly aware of the inescapable nature of death, which can contribute to heightened levels of death anxiety among older persons. The stage of life holds significance as individuals confront mortality and endeavour to attain a sense of integrity as they approach the end of their lives (Erickson, 1950). Death anxiety encapsulates feelings of apprehension and fear associated with the concept of death (Tomer & Eliason, 2000), involving a sense of threat, unease, and discomfort.

The level of death anxiety individuals undergo can be influenced by various factors, including age, gender, religious and spiritual beliefs, living arrangements (such as residing in institutions or living with family), and the availability of social support (Jo & Song, 2012). Additionally, psychological factors like despair, reduced self-esteem, a negative outlook on life's meaning, loss of ego integrity, feelings of loneliness, and depression also contribute to death anxiety (Lim, *et al.,* 2017).

However, research suggests that older persons upholding a positive outlook on life is linked with lower levels of death anxiety (Azarian, *et al.,* 2016). Conversely, individuals contending with despair (Gesser, *et al.,* 1988), perceiving a lower level of social support (Adeeb, *et al.,* 2017), exhibiting pessimism (Barnett, *et al.,* 2018) or grappling with loneliness (Chow, 2017) are more susceptible to experiencing an increased level of death anxiety.

Many older persons often spend their lives in institutionalized settings as compared to living with their families in the community.

Life within institutions tends to be more regimented with schedules and limited social interactions. Insufficient social support within these institutions can have effects on the well-being of older persons, potentially increasing feelings of anxiety about death and related thoughts. Consequently, social support plays a role in ensuring ageing by aiding older persons in navigating the physical and social challenges of advancing age. Providing comfort and fostering companionship serves as a crucial mediator for successful adjustment, ultimately leading to improved mental health, reduced levels of death anxiety, and a lower risk of depression (Gale, *et al.,* 2018). Therefore, promoting support among individuals can significantly enhance their psychological well-being and overall social functioning. Conversely, the absence of support may result in adverse outcomes such as loneliness and isolation, which have been linked to various health problems among older persons (Shankar, *et al.*,2017).

Purpose of the study

The significance of the study lies in its ability to provide insights into the relationship between social support and death anxiety among older persons living in institutions and communities. The findings of this study can guide interventions aiming to enhance support, leading to improved mental well-being and a reduced risk of adverse outcomes like depression and anxiety about death. Additionally, the study can shed light on any differences in support and mental health outcomes between older persons living in institutions and those living in communities, informing policies and practices that aim to enhance their quality of life and overall health. In summary, the results of this study have implications for ageing and the well-being of older persons, contributing to addressing the needs of a growing part of the global population.

Objectives

1. To assess the level of death anxiety and perceived social support between the institutionalized and community-based older persons.

2. To estimate the correlation between death anxiety and perceived social support between the institutionalized and community-based older person.

Method

Sample

For this cross-sectional descriptive study, 120 respondents, 60 from institutionalized settings and 60 from community-based settings, were selected by purposive sampling to ensure representation. Inclusion criteria : Individuals over 60 years, regardless of gender, who could understand and provide consent were included. Exclusion criteria included organic or psychotic disorders.

Tools Used

A. Socio-Demographic Data Sheet

Socio-demographic details were collected, including name, age, gender, religion, type of residence, occupation, marital status, and educational status.

B. Mini-Mental Status Examination (Folstein, et al.,1975)

MMSE is an instrument for grading the patient's cognitive state. It measures orientation, registration, attention calculation, recall, and language.

C. Death anxiety scale (Templer, 1970)

The scale comprised fifteen items. It was developed on a two-factor model of death anxiety, including psychological factors that are internal and external, about life experiences related to death.

D. Multidimensional scale of perceived social support (Zimmet et al., 1988)

The scale consists of 12 items and is based on a five-point Likert scale. The scoring procedure of the scale comprised of low support (1-2.9), moderate support (3-5), and high support (5-1.7)

All tools used in the study were translated into vernacular language based on WHO guidelines for translation. Ethics and participant rights were given importance throughout the research

process. Received approval from the research ethics committee/DRC of the Department of Psychology, Guwahati University, in Guwahati

Statistical analysis

Independent sample t-tests were performed to compare the two groups (institutionalized elderly vs. community-based elderly) on measures for death anxiety and social support. A chi-square test was applied to see the association between levels of perceived social support and groups. Data was analyzed using IBM Statistical Package for Social Sciences for Windows, version 25 (IBM Corp., Armonk, New York, USA).

Results

Table 1

Frequency and percentage of the Socio-demographic between institutionalized and community-based older persons.

Socio-demographic details	**Community n = 60 (Group 1) *f (%)***		**Institutionalized n = 60 (Group 2) *f(%)***	
	f	%	*f*	%
Gender				
Male	24	38.0	18	29.4
Female	36	62.0	42	70.6
Age distribution				
60-65	14	23.3	12	20.0
66-70	22	36.7	18	30.0
71-75	14	23.3	20	33.3
75 and above	10	16.7	10	16.7
Religion				
Hinduism	46	76.7	48	80.0
Islam	13	21.7	11	18.3
Christianity	1	1.7	1	1.7
Marital status				
Married	34	56.7	12	20.0
Unmarried	6	10.0	15	25.0
Spouse Died	20	33.3	33	55.5
SES				
Low	4	6.7	14	23.3
Low-middle	26	43.3	34	56.7
Upper-middle	30	50.0	12	20.0

Table 2

Comparison of death anxiety between the older persons living in institutionalized set-ups and their community-based counterparts

Variable	Community (n = 60)		Institutionalized (n = 60)		t (118)	p
	Mean	SD	Mean	SD		
Death anxiety	20.55	5.62	15.88	4.97	4.64	0.01

From the above Table 2 shows the comparison on the death anxiety scale between institutionalized and community-based older persons. Institutionalized older persons had significantly higher death anxiety than their community counterpart (t (118) = 4.64, p=.01).

Table 3

Perceived Social Support between Institutionalized and Community older persons

Variable	Community (n = 60)		Institutionalized (n = 60)		t (118)	p
Perceived social support	Mean	SD	Mean	SD		
Significant others	18.75	3.81	12.26	4.62	8.34	0.001
Family	19.98	3.47	13.67	5.25	7.74	0.001
Friends	15.43	4.32	12.40	4.48	3.77	0.001
Total	4.50	7.43	3.12	1.47	8.16	0.001

Community older persons had significantly higher perceived social support from families, friends, and significant others than their institutionalized counterparts (See Table 3). A significant association between perceived social support and groups (institutionalized and community set-ups) was also observed (S«2=48.16,p=0.01). Significantly more number of participants in the institutionalized setups were in low and moderate levels of social support (See Table 4)

Table 4

Association between level of perceived social support and groups (institutionalized and community-based older persons)

Perceived social support	Community (n = 60)		Institutionalized (n = 60)		X^2(df)	p
Category	n	%	n	%		
Low support	1	1.7	35	58.3		
Moderate support	42	73.9	22	36.7	48.16	0.001
High support	17	28.3	3	5.0		

Relationship between death anxiety and perceived social support among community and institutionalized older persons.

Correlation between death anxiety and social support was found to be insignificant for both the institutionalized older persons (*r=0.34,p=.799*) and community counterparts (*r=0.63,p=.705*)

Discussion

The present study was designed to explore the nature of death anxiety and social support among institutionalized and community-based older persons. Older persons living in institutionalized set-ups differ from (death anxiety and social support) those in community-based older persons. Eventually, the relationship between these variables (death anxiety and social support) was assessed for institutional and community-based older persons.

Older persons living in institutionalized set-ups had higher death anxiety.

Older persons living in institutionalized settings tend to feel anxious about death compared to those who live in community-based settings. This anxiety can significantly affect their well-being and overall happiness, mainly because the loss of loved ones can result in feelings of solitude and seclusion. Furthermore, the social network of older persons can become restricted, and being separated from family members can intensify their fear of death and related thoughts.

The study examined the levels of death anxiety between institutionalized and community-based older persons. Descriptive analysis revealed that institutionalized individuals exhibited higher levels of death anxiety compared to their counterparts living in the community. These findings suggest that factors like separation from family, feelings of humiliation, loneliness, and loss of hope contribute to increased death anxiety among institutionalized older persons. These results align with studies, including the one conducted by Deniz *et al.,* (2021), which also found a correlation between settings and heightened thoughts about death and loss of loved ones. Furthermore, earlier research has indicated that well-being, as indicated by death anxiety, can be linked to a lack of social support, feelings of isolation, and a sense of purposelessness in life (Saini, *et al.,* 2016; Nagaraj & Nithyanandan, 2019).

Community-based older persons had higher social support

Community-based older persons generally receive a higher level of social support compared to those residing in institutionalized settings. The presence of support, especially from close family members and friends, plays a crucial role in maintaining overall well-being and satisfaction during later stages of life. On the other hand, older persons, having lost their spouses, may experience a decline in self-esteem, leading to emotional distress and feelings of isolation as they grow older. These feelings of isolation can affect health outcomes and significantly impact the quality of life for older persons.

Descriptive statistics were used to examine the level of social support between individuals living in institutions and those in the community. The results revealed that community-based older persons reported a perceived level of support due to their regular interactions with close family members, open expression of emotions, and stronger family bonds. As a result, they were able to develop a meaningful network, and experience reduced feelings of loneliness and anxiety compared to those living in institutions. This finding aligns with the research by Wu and Sheng (2019), emphasized the impact

of family support on aging while highlighting the importance of self-efficacy for successful aging. Furthermore, Faiza *et al.*,(2019) found that social support from others, friends,and family is associated with better health-related quality of life among older persons. In addition, Melchiorre *et al.,* (2013) underlined the role of support as an effective coping strategy that dramatically influences the overall quality of life among older persons.

Conclusion

The study revealed that older people living in institutions have higher levels of death anxiety and lower levels of social support compared to those living with their families or in the community. These findings highlighted the importance of promoting social support to improve life satisfaction coping skills and reduce feelings of loneliness and isolation. Institutions can organize health awareness programmes. Engage older persons in activities to enhance their quality of life. Encouraging them to participate in resilience-building programmes and informal groups within their communities is also beneficial, fulfilling their need for interaction, recreation, and other activities. These findings provide insights for developing psycho-social support programmes that address the challenges faced by older persons.

Limitations of the study

- There was no gender and age comparison done between institutionalized and community-based older persons in the present study
- Caregivers perspectives were not taken into consideration
- The tools selected for the present study were self-reporting in nature. Participants might tend to portray themselves in a good light due to social desirability bias.
- The study was purely quantitative; a mixed approach could have provided richer data and a picture of psycho-social factors or problems among older people.

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Mild Cognitive Impairment in Elderly : Efficacy of Integrative Neurocognitive Psychotherapy

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ABSTRACT

The present study aimed to see the efficacy of an integrative neurocognitive psychotherapy customized for five elderly participants (three males and two females), ages varying from 65 years to 75 years, clinically diagnosed with Mild Cognitive impairment (MCI) in an outpatient-based clinic. The participants were assigned a customized neurocognitive psychotherapy package totaling 12 sessions for six months. The intervention programme primarily comprised cognitive training focusing on attention, memory, language, and executive function, along with psycho-education, supportive counseling, and behavioural management. Participants were assessed pre and post-training programmes, as well as a follow-up. The analysis of findings revealed better scores in cognitive functioning and low scores on the depression scale after the intervention. Improvement was found in the cognitive and behavioural functioning of the individuals. Based on the present findings, it may be concluded that a comprehensive neurocognitive

psychotherapy intervention, including psycho-education, supportive counseling, cognitive training, and behavioural management, improves cognitive deficits, mood symptoms, and social functioning in MCI clients.

Keywords : Ageing, MCI, Cognitive deficits, Neurocognitive psychotherapy

In recent years, there has been an increased understating of the cognitive continuum that spans from the typical ageing process to the onset of Alzheimer's disease (AD) (Aisen *et al.,* 2017). Within this spectrum lies a pivotal phase often referred to by terms such as mild cognitive impairment (MCI), dementia prodrome, incipient dementia, and isolated memory impairment, among others. MCI bridges the cognitive changes associated with normal ageing and the more profound cognitive impairments seen in dementia (Apostolova, 2016; Zvěřová, 2019). It is important to emphasize that MCI is not invariably a precursor to dementia; instead, it represents an intermediate stage characterized by cognitive challenges that may or may not progress further (Knopman, 2003). The terms "intermediate" and "transitional" are employed carefully, as MCI, though distinct from typical ageing, does not uniformly evolve into dementia (Chakraborty *et al.*, 2022). Cognitive intervention includes a diverse array of non-pharmacological approaches (Halder, 2022) designed to enhance cognitive performance, and these interventions may target various cognitive domains, including memory and executive function, and extend to broader areas of functioning such as activities of daily living (ADL), quality of life (QoL), and emotional well-being.

The present study aimed to assess the effectiveness of a tailored integrative neurocognitive psychotherapy programme designed specifically for individuals with MCI in an outpatient setting.

Sample

Case description

The study included five individuals aged 65 to 75 (three males and two females), each clinically diagnosed with Mild Cognitive

Impairment (MCI). Complaints reported mainly by participants included forgetfulness, interruptions in conversations, persistent low mood, difficulties in the flow of conversation, subsequently causing embarrassment and frustration, often feeling overwhelmed by daily tasks, struggling with planning and decision-making tasks, frequent anger outbursts, and difficulties in emotional control.

Assessment : The Montreal Cognitive Assessment (MoCA) (Nasreddine *et al.,* 2005) was administered to screen for depressive symptoms among the studied participants. The Mild Cognitive Impairment and Geriatric Depression Scale (GDS) (Yesavage *et al.,* 1982) was also administered to screen for depressive symptoms.

Psychotherapeutic Plan

Though the individual psychotherapeutic intervention plan was tailor-made, a generic therapy formulation standard for all five participants owing to their cognitive decline and related factors was made. The intervention plan included 12-14 sessions over 3-4 months: the therapeutic approach integrated psycho-education, supportive counselling, cognitive training, behavioural management, and family counselling. The primary target was to improve the daily living function and cognitive skills of participating individuals diagnosed with MCI. The goals included enhancing awareness of their condition, reducing the risk of cognitive deterioration, providing emotional support, and promoting engagement in meaningful activities. Cognitive training specifically targeted attention, memory, language, and executive functions. Behavioural management focused on daily activities and interpersonal interactions. Family counselling aimed to involve and educate family members in the treatment process to create a supportive environment.

Target Behaviours for participants:

1. **Cognitive Domain** : Attention. Memory, Language Fluency, Executive Functioning
2. **Mood and Affect** : Low mood, Irritability
3. **Behaviour** : Behavioural Disorganization

Results

A pre-and post-assessment of cognitive functions and depression levels of the studied sample was done. Considering limited quantitative measures, a qualitative analysis through self- and Ni error (NIER) reporting was also done.

Table 1

Quantitative Analysis of Cognitive Functioning and Level of Depression

Assessment	Pre-intervention (Mean)	Post-intervention (Mean)
Cognitive Functioning (MOCA)	20.23	24.65
Level of Depression (GDS)	11.25	7.38

Figure 1

Changes in scores in cognitive functioning and depression

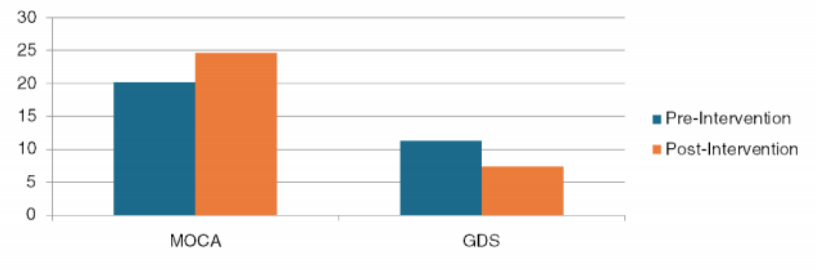

Table 2

Qualitative Analysis of Cognitive and Other Functioning

Domains	Pre-intervention	Post-intervention
Mood	Irritability, frustration, and anger outbursts were significantly present	Reduced anger expression and irritability. Better control over emotional expressions.
Social Interaction	Being aloof, limited social interaction	Taking initiative in interacting with close family members and friends.
Communication Skills	Difficulty, mainly communicating with limited words; avoiding conversation	Improved fluency in conversation
Attention, Memory, Executive Function	Distracted, difficulty in recall, and poor organization of tasks	Improved and more active in performing tasks (cognitive)

Discussion

Dementia and neurocognitive disorders are widely recognized as irreversible conditions, often associated with a progressive decline in cognitive and emotional functioning. The study sought to understand the potential for intervention in enhancing the cognitive and emotional well-being of five individuals aged 65 to 75 who presented with cognitive and emotional functioning changes indicative of MCI.The present study's findings support integrative psychotherapeutic intervention, planned for 14 sessions, found efficacious in cognitive and emotional symptoms of the cases with MCI, and its effect maintained for five months after the intervention. These findings are consistent with prior research, including different integrative psychotherapies that significantly decreased cognitive and affective symptoms in individuals with MCI (Huckans *et al.,* 2013). The present study placed a strong emphasis on emotional well-being, with a particular focus on family counselling and support when dealing with clients with MCI. Although the cognitive deficits associated with MCI do not limit independent functioning, research indicates that people with MCI experience changes in their psychological and everyday functioning, as well as their quality of life (QOL).

The study findings also highlight that cognitive interventions can focus on helping individuals adapt to changed cognitive abilities without necessarily attempting to improve those abilities themselves (compensation) (Halder & Samajdar, 2021). While impactful in specific cognitive domains, cognitive interventions may only partially affect the broader construct of QOL (Buschert, *et al.,* 2011). The focus on ADL improvement and the potential for metacognitive empowerment resonates with our comprehensive multimodal intervention approach. While the present study aligns with the positive outcomes observed in prior research, it also acknowledges the complexity of improving mood and QOL in MCI participants.

Conclusion

The present study focuses on tailoring interventions to address individuals' unique cognitive and emotional needs with MCI. Through structured cognitive training exercises, individuals in this study made notable progress in various domains, including attention, memory, language, and executive functions, as revealed by changes in MOCA scores. Overall, this study highlighted the value of comprehensive and individualized intervention plans for meaningful improvements in cognitive functioning, emotional well-being, and daily functioning. The findings from this study provide valuable insights into developing more effective and personalized intervention plans for individuals with MCI, ultimately promoting their independence and enhancing their overall quality of life.

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Effectiveness of Shiatsu Massage on Chemoradiation-Induced Pain Among Elderly Women with Cervical Cancer

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ABSTRACT

The study aimed to assess the effectiveness of shiatsu back massage on chemo-radiation-induced Pain Among elderly women with cervical cancer. 60 elderly women, ages varying from 60 years and above, with cervical cancer were selected randomly at Government Thoothukudi Medical College Hospital (T.N.). Elderly women with cervical cancer were divided into two groups-experimental (N=30), and control (30), by lottery method. The pretest level of chemo-radiation-induced pain was assessed by using the numerical pain scale in both groups was perceived as severe. A Shiatsu back massage of 10 minutes per day for 4 weeks was given to the experimental group. The control and experimental groups' post-test mean difference was 1.63. This difference is large and significant. It was tested using student independent t-test. In the Experimental group the Mann-Whitney U- test t= 9.52 which was highly significant at P < 0.001 level. There was no significant association between pre and post-

test levels of Chemo-radiation-induced Pain with selected demographic variables. Elderly women with cervical cancer who had undergone shiatsu back massage had a statistically significant in reducing Chemo-radiation pain.

Keywords : Shiatsu back massage, Chemo-radiation Side effects Pain, Cancer cervix women.

Cancer is a group of diseases involving abnormal and uncontrollable cell growth with the potential to invade or spread to other parts of the body. Cervical cancer is the second most common reproductive cancer in women. The most common short-term side effects of chemo-radiation therapy include pain, nausea and vomiting, hair loss, fatigue, anemia, oral mucositis, and diarrhea. Pain is a distressing feeling often caused by intense or damaging stimuli. Pain is "an unpleasant sensory and emotional experience associated with actual or potential tissue damage.

Older women are at increased risk of developing cervical, ovarian, and endometrial cancers. If an elderly woman develops these cancers, she is more likely to die from them than a younger woman. Treatment modalities for gynecologic cancers include surgery, radiotherapy, and chemotherapy. Treatment options such as radiotherapy may be associated with significant morbidity for elderly women. Most chemotherapeutic regimens are tolerated by elderly women, but modification of dose or agent may be necessary in selected cases. (McGonigle KF, *et al.,* 1993).

Elderly women account for about 25 percent of cervical cancer cases worldwide, and the 5-year survival rate is about 40.8 percent, showing that age more than 65 years was an independent prognostic factor of cervical cancer. As the population ages, the number of elderly women with cervical cancer is also expected to increase, so therapeutic efficacy deserves further attention. (Diver, *et al.,* 2018).

The physical status of elderly women with cervical cancer is exacerbated by other age-related conditions such as hypertension,

diabetes, and heart disease. According to the International Federation of Obstetrics and Gynecology and Obstetrics Staging Systems, radiotherapy for early cervical cancer is as effective as surgery. Various studies have shown that radiotherapy is well tolerated in elderly patients with cervical cancer, even those aged 80 years or more. (Wenjuan Chen, *et al.,* 2023).

With the growing ageing society, the number of elderly patients with various malignancies has been increasing. The prevalence rate decreases for women aged 50 to 60 and increases again for women in their 70s. As a result of the ageing society and the increase in prevalence rate, the number of elderly patients with cervical cancer has been increasing. Treatment modalities should be selected carefully because of the high likelihood of toxicity from the treatment and concurrent medical problems, such as hypertension, diabetes mellitus, dementia, cerebral infarction, and other cancers. In the daily clinical setting, the opportunities for treating elderly patients with several concurrent medical problems are increasing. (Kenji Yoshida, *et al.,* 2012).

Cervical cancer screening is generally recommended until age 65. The incidence of cervical cancer could be underestimated, particularly in older women, due to a lack of hysterectomy correction. Further more, elderly women more than 65 years old are more often diagnosed with late stage disease and have worse outcomes than younger patients. Due to the high disease burden in elderly women, screening and treatment strategies need to be improved. (Sonja Neumeyer, *et al.,*2023).

Review of Literature

Pain is a distressing feeling often caused by intense or damaging stimuli. In Cancer, some chemotherapy drugs can cause painful side effects. Pain affects the Quality of life of cancer cervix women. Therapeutic massages reduce symptoms, improve coping, and enhance the quality of life of cancer patients. **Shiatsu,** meaning "finger pressure," is a Japanese massage, a form of physical manipulation of acupuncture points and meridians. Working on the same principle

as acupuncture. Rubbing and kneading the back 10 minutes per day for 4 weeks reduce schemoradiation pain. (Lakshmi Prabha, S., *et al.,* 2022).

Argash and Caspi (2008) demonstrated that Shiatsu massage is a non-pharmacologic method to relieve symptoms and improve the quality of life of cancer patients. Further, he stated that acupressure is relatively effective and safe for common cancer-related symptoms. Shiatsu massage therapy is relatively effective and safe for fatigue and muscular pain.

Marvin and Eduardo Bruera (2008) stated in their study that pain in elderly cancer patients was managed in an interdisciplinary environment using pharmacologic and nonpharmacologic interventions whose main goal was to improve quality of life. Massage and other complementary measures like heat, cold packs, and cognitive strategies relieve the cancer pain in older cancer patients.

Lisa Corbin (2005) described the safety and efficacy of massage therapy on cancer cervix. Cancer patients receiving chemoradiation had some common side effects, mainly fatigue and pain. Massage therapy relieves stress, anxiety, and pain. So, the study concluded that massage therapy relieves stress, anxiety, and pain among women with cervical cancer.

Yueyue Zhang, *et al.,*(2023) conducted a study to evaluate the effects of massage therapy on chemoradiation-induced cancer pain. Massage therapy could significantly relieve cancer pain in patients. Foot reflexology and hand acupressure moderately affected cancer pain relief, with hand acupressure being more effective. Massage duration of 10 to 30 minutes and a programme length of e”1 week had a better effect and could significantly relieve pain. The study concluded that massage therapy can be used as a complementary alternative therapy to relieve cancer pain.

Daiki Kobayashi, *et al.,* (2019) conducted a study to evaluate Shiatsu for chronic lower back pain. After one hour of Shiatsu every week for four weeks, they observed greater improvements in pain.

Thenmozhi Paluchamy, *et al.,* (2023), in a study, stated the effect of Shiatsu massage on reducing the side effects of anxiety and fatigue. 30 samples were included in the study as experimental and control groups.The experimental group received a shiatsu massage for 2-8 minutes twice daily for seven days. After the intervention, the mean scores of fatigue and anxiety were significantly lower than before the intervention ($p<0.001$). The result also showed the post-test mean score of fatigue and anxiety is significantly ($p<0.001$) less in the experimental group than in the control group. The study concluded that shiatsu massage effectively reduces fatigue and anxiety among chemotherapy patients.

Neil Browne,*et al.,* (2018) reported in their study the effectiveness of shiatsu therapy in managing health and well-being concerns of cancer and palliative care patients. The study reported that anxiety, stress management, and pain scores were improved after shiatsu massage therapy.

A report by Tuhin Deb *et al.,* (2023) demonstrated the effectiveness of Shiatsu on pain among elderly people with arthritis who stay in old age homes. They also identified Pain among elderly people with arthritis as one of the major causes of disability throughout the world. The study concluded that shiatsu massage therapy has an immense effect on reducing the levels of pain among the elderly with arthritis.

Iwona Wilk *et al.,* (2022) found that lower back pain is one of the most common complaints in the elderly. Back pain leads to reduced function, difficulty performing activities of daily living, and prevents physical activity. Massage is one of the more commonly used forms of physiotherapy. Patients received classical therapeutic massages for 3 weeks at a frequency of 2 times a week, which reduced spinal pain in older adults. Massage is an effective therapy for reducing back pain in older adults.

Objectives of the study

- To assess the chemo-radiation-induced pain among elderly women with cervical cancer in experimental and control groups before shiatsu back massage.
- To evaluate the effectiveness of shiatsu back massage on chemo-radiation-induced pain among elderly women with cervical cancer.
- To find the association between the levels of chemo-radiation-induced pain with selected demographic and obstetric variables in the experimental and control groups.

Research Hypotheses

H_1 : There is a significant difference between pre and post-test levels of chemo-radiation-induced pain among elderly women with cervical cancer in the experimental group.

H_2 : There is a significant association between the levels of chemo-radiation-induced pain with selected demographic and obstetrical variables among experimental and control group.

Method

Sample

60 elderly women, 60 years and above, with cervical cancer admitted to the oncology ward at Government Thoothukudi Medical College Hospital who fulfilled inclusion criteria, were selected by Random Sampling Technique (Lottery Method). These subjects were again Randomly divided into two groups, equal in numbers-(30 experimental, 30 control). The participants could read and communicate in Tamil and were free from any medical condition e.g. heart disease and stroke. The subjects having severe illness, surgery, stage IV, and severe psychological disease were excluded from the study.

Tools used

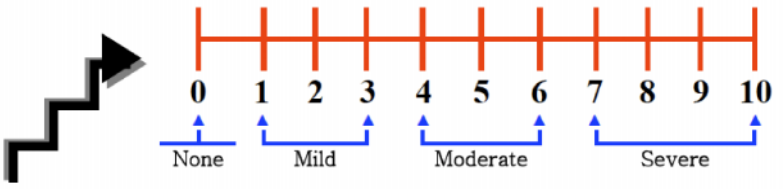
The numerical Pain Rating Scale (McCaffery, and Pasero, 2000) was used to assess the effectiveness of shiatsu massage on

chemoradiation-induced pain among elderly women with cervical cancer.

Description of the Numerical Pain Scale : It is a unidimensional measure of pain intensity in adults, including those with chronic pain due to rheumatic diseases. This pain screening tool is commonly used to assess pain severity at that moment in time using a 0–10 scale, with zero meaning "no pain" and ten meaning "the worst pain imaginable"

Patient Instructions : "Please indicate the intensity of current, best, and worst pain levels over the past 24 hours on a scale of 0 (no pain) to 10 (worst pain imaginable)".

General Information : The patient is asked to make three pain ratings corresponding to current, best, and worst pain experienced over the past 24 hours. The average of the three ratings was used to represent the patient's pain level over the previous 24 hours.



0 – Pain Free

Mild Pain – *Nagging and annoying, but doesn't interfere with daily activities.*

1 – Pain is very mild, barely noticeable. Most of the time you don't think about it.

2 – Minor pain. Annoying and may have occasional more muscular twinges.

3 – Pain is noticeable and distracting, however, you can get used to it and adapt.

Moderate Pain – *Interferes significantly with daily living activities.*

4 – Moderate pain. If you are deeply involved in an activity, it can be ignored for some time but is still distracting.

5 – Moderately intense pain. It can't be ignored for more than a few minutes, but with effort, you can still work or participate in some social activities.

6 – Moderately intense pain that interferes with regular daily activities. Difficulty in concentrating.

Severe Pain – *Disabling; unable to perform daily living activities.*

7 – Severe pain that dominates your senses significantly limits your ability to perform normal daily activities or maintain social relationships. It also interferes with sleep.

8 – Intense pain. Physical activity is severely limited. Conversing requires great effort.

9 – Excruciating pain. Unable to converse. Crying out and/or moaning uncontrollably.

10 – Unspeakable pain. Bedridden and possibly delirious. Significantly, few people will ever experience this level of pain.

A questionnaire was also used to collect demographic and obstetrics information about the subjects.

Procedure

The respondents were divided into two groups : the experimental group 30 and the control group 30. For a pre-test assessment of chemoradiation, cervical cancer pain was assessed by administration ofa numerical pain scale in experimental and control groups.

The participants in the experimental group received an intervention of Shiatsu Back massage 10 minutes per day for 4 weeks along with conventional medicine with standard care.

The control group received conventional medicine with standard care provided by the clinical nurse at Government Thoothukudi Medical College Hospital. At the end of the 4-week intervention period, post-test assessments were conducted using the same numerical pain scale for the experimental and control groups.

Shiatsu back massage is a form of massage therapy, that uses the fingers to press on specific points of the back. Using direct pressure and kneading, soothing and stretching the back. The term shiatsu is a derivative of "Shi" which means finger, and "atsu" means pressure in Japanese. Shiatsu is often referred to as acupressure. On the other hand, ordinary massage is rubbing and kneading the body using the hands. For patients undergoing cancer treatment, especially chemoradiation therapy, shiatsu massage promotes emotional and physical calm and relaxation, helps relieve pain, may relieve headaches, reduces muscle tension, and improves sleep and fatigue.

Shiatsu Back Massage Technique

Place the bottom hand on either side of the sacrum. Place the palm and fingertips hand by applying pressure along either side of the spine. Just rotate the body forward and back while keeping steady pressure over the sacrum.

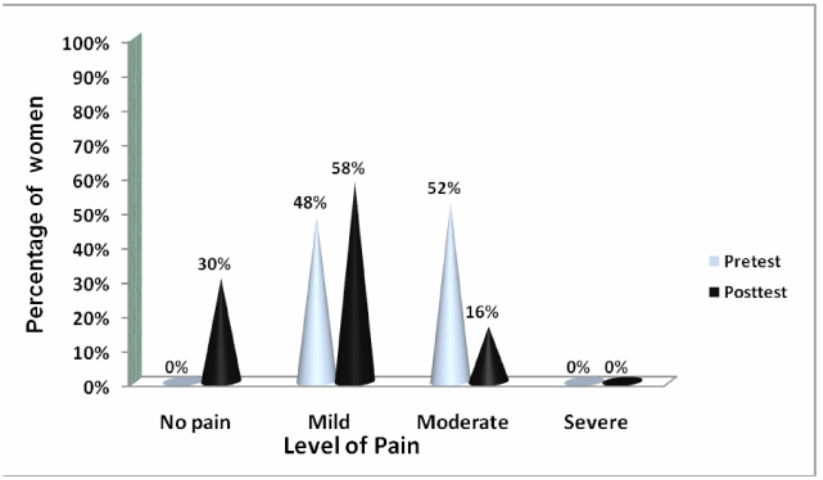
Performing Shiatsu Back Massage to elderly women with cervical cancer

Before the study, informed consent was obtained from all the participants. Permission from the Department of Oncology, Government Thoothukudi Medical College, Thoothukudi District, was sought before the study. The study was approved by the IHEC and conducted from February 2023 to March 2023.

Results

Figure 1

The multiple cone diagram shows the percentage-wise distribution of pre-test and post-test level pain among elderly women with cervical cancer in the experimental group. (n=30)



Multiple cone diagram on the Percentage distribution of respondents

In the pre-test, the highest level, 52 percent, had moderate scores, 48 percent had a mild level of score, and none of them had severe and average pain scores. In the post-test, none had a severe score, 12 percent had a moderate level score, 58 percent had a mild level score, and 30 percent had no pain score after implementing the Shiatsu back massage.

Table 1

Comparison of mean pain score between experimental group and control group

	Experimental (n=30)		Control (n=30)		Mean difference	Student independent t-test
	Mean	SD	Mean	SD		
Pre-test	5.40	2.27	5.23	2.06	0.17	t=0.30P=0.77(NS)
Post-test	3.00	2.22	4.63	1.30	1.63	t=3.32 P=0.01**(S)

Pd"0.001very high significant S= significant

The above table compares the pain scores between the Experimental group and the Control group. In the pre-test Experimental group of patients had a 5.40 score and the control group of patients had a 5.23 score, so the difference was 0.17. This difference is small and it is not significant. It was tested using student independent t-test. In the post-test Experimental group of patients had a 3.00 score and the control group of patients had a 4.63 score, so the difference is 1.63, this difference is large and it is significant. It was tested using student independent t-test.

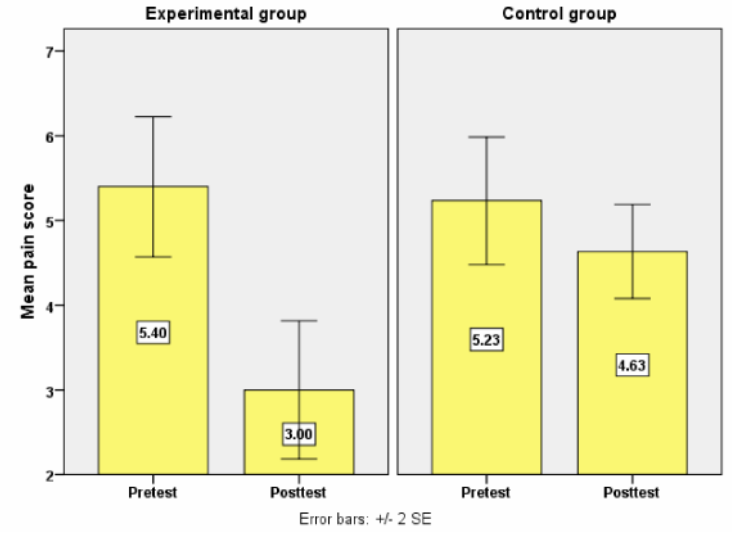


Figure 2

Simple bar diagram with 2 standard errors compares the preand post-test pain score

Figure 2 compares the pre-test and post-test pain scores in the experimental group. The pretest mean pain score was 5.40, and the post-test score was 3, so the difference was 2.40. In the control group, the mean score during the pre-test test was 5.23, and the post-test score was 4.63. So, the difference between the pre-test and post-test control group's mean score was only 0.6. These results demonstrate that chemoradiation-induced pain in the experimental group significantly improved after the shiatsu back massage intervention.

Table 3

Comparison of Pre-test and Post-test Pain Scores

	Pretest		Posttest		Mean	Mann Whitney
	Mean	SD	Mean	SD	difference	U-test
Experimental	5.40	2.27	3.00	2.22	2.40	t=9.52 P=0.001***(S)
Control	5.23	2.06	4.63	1.30	0.60	t=1.60 P=0.13(NS)

The above table compares the pain score between the pre-test and post-test. In the experimental group. In the pre-test, patients had a 5.40 score, and, in the post-test, they had a 3.00 score, so the difference is 2.40, this difference is large and it is a significant difference. It was tested using Mann Whitney U-test. In the control group. In the pre-test, patients had 2.06 scores and, in the post-test, they had 4.63 scores, so the difference is 0.60, this difference is small and it is not significant. It was tested using Mann Whitney U-test.

Discussion

The results of the study showed that elderly women with cervical cancer, participants demonstrated improved chemoradiation-induced pain after shiatsu back massage 10 minutes in the morning per day for 4 weeks. The current study's findings were supported by the following research studies:

A Study by Harald Gaier (2014) found that 30-minute massage sessions two-week period outcome showed "immediate and

sustained" change in pain. In comparison, the secondary outcome revealed an "Immediate" change in mood. Massage Therapy had immediate beneficial effects on pain and mood among patients with advanced cancer patients. After reviewing the literature, M. Piazza *et al.*, (2017) described 13 articles on massage therapy, chemotherapy, and quality of life. The articles assessed the effectiveness of massage therapy on physical and psychological symptoms. There has been a reduction in pain, anxiety, depression, and stress.

In her study, Lakshmi Prabha (2022) stated that chemoradiation therapy most common short-term side effects of include pain, nausea and vomiting, hair loss, fatigue, anemia, oral mucositis, and diarrhea. Pain is a distressing feeling often caused by intense or damaging stimuli. Therapeutic massages reduce symptoms, improve coping, and . . . . . **. Shiatsu,** meaning "finger pressure," is a Japanese massage, a form of physical manipulation of acupuncture points and meridians. Working on the same principle as acupuncture. Rubbing and kneading the back 10 minutes per day for 4 weeks reduces chemoradiation pain. The current study's findings further add the Shiatsu back massage intervention improves pain reduction and enhances the quality of life of elderly women with cervical cancer.

Neil Brown, *et al.*, (2018) in their study Relieving Pressure – An Evaluation of Shiatsu Treatments for Cancer & Palliative Care Patients in an NHS setting, investigated the effectiveness of Shiatsu therapy concerning the management of health and well-being concerns of cancer and palliative care patients in an out-patient clinic. Mean changes in shiatsu massage post-intervention scores were highly significant (p/ </ 0.001). The study concluded that anxiety, *stress management*, and pain scores were the most improved after shiatsu massage therapy for cancer patients.

Conclusion

This study has provided valuable insights into the feasibility and practicability of implementing interventions aimed at reducing chemoradiation-induced pain among elderly women with cervical

cancer admitted at Government Thoothukudi Medical College, Thoothukudi. Several key findings emphasise the viability of such interventions in this context. The findings of the study can encourage nurse administrators to arrange a CNE programme for nurses regarding the effectiveness of Shiatsu back massage to reduce chemo radiation-inducedcervical cancer pain in clinical settings. These findings will encourage nurse administrators to encourage nurses to administer and practice it on women with cervical cancer. Finally, it may be concluded that the findings of this study provide valuable insights for policymakers, healthcare providers, and researchers interested in enhancing the lives of chemo-radiation-induced pain among elderly women with cervical cancer.

Limitation of the Study : The sample size of this study was too small. A similar study can be conducted for the large samples to generalize the findings.

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The Interplay of Ageing and Wellness Among Elderly with Parkinson's Disease : A Review

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ABSTRACT

This comprehensive review paper is based on an extensive analysis of 33 articles published in various reputable research journals. These articles present the most recent empirical evidence on the association between well-being and ageing under the treatment methods. The research was conducted by surfing search engines and databases, including Scopus, PubMed Central, Google Scholar, ProQuest, and Jstor. The article was themed according to the mental health, quality of life, activities of daily living, cognitive decline, social interaction, and social support of Parkinson's patients.

Keywords : Parkinson's disease, Therapies, Elderly, Psychological well-being, Mental health.

Parkinson's disease (PD) is a chronic neurodegenerative disorder caused by nigrostriatal dopaminergic system failure. (Dauer & Przedborski, 2003). It is a detrimental neuronal syndrome

characterized by symptoms related to motor function, such as slow movement, stiffness, tremors, and gait imbalance, as well as a wide range of non-motor problems, namely cognitive impairment, psychological disorders, pain, and various sensory disturbances (World Health Organization: WHO, 2022). Usually, this disease affects older adults (1.9%) and the elderly (2.6%), as per the statistics of the Indian Council of Medical Research (2020). By 2019 status, 8.5 million people were affected by Parkinson's disease worldwide. Globally, the occurrence rate of Parkinson's disease has doubled in the last 25 years, which leads to 5.8 million disability-adjusted life years (WHO).

Neurological disorders have doubled between 1990 and 2019, and Parkinson's disease is 1.8 percent of the total Neurological disorders burden (ICMR – Press release, 2021). Furthermore, to the commonly recognized motor symptoms such as tremors and rigidity, Parkinson's disease (PD) frequently manifests with a wide range of non-motor symptoms, including cognitive impairment, depression, anxiety, and sleep difficulties (Aarsland, *et al.,* 2023). These non-motor symptoms may significantly reduce the quality of life and require comprehensive management measures that target mental and physical health (Baumbach, *et al.,* 2015).

Methodology

This review article aimed to gather recent empirical evidence on the association of well-being and ageing with treatment methods. Search engines and databases were surfed : Scopus, PubMed Central, Google Scholar, ProQuest, and Jstor. The articles were themed according to the mental health, quality of life, activities of daily living, cognitive decline, social interaction, and social support of Parkinson's patients. A total of 33 articles were used in this study. Duplicates were removed, and articles were selected based on their full text and content. Articles with irrelevance were excluded. Studies included purposefully contained the themes mentioned above and the variables in them.

Mental Health of Parkinson's Patients

Mental health problems play a significant contribution to physical illness among the elderly. It also leads to disability among PD patients (Gallagher, *et al.,* 2010). The majority of older adults over the age of 60 are affected by Parkinson's disease. Individuals diagnosed with Parkinson's disease often experience depression and anxiety symptoms right from the time they get diagnosed (Yazd, *et al.,* 2023). The mental health of those patients has to be given keen importance. Mental health is less studied when compared to physical health and motor symptoms of Parkinson's disease. The ageing-related myths and negative stereotyping might lead to the concept of ageism. (Cavanaugh & Blanchard-Fields, 2010)

It is essential to consider factors like sociocultural, gender, race, ethnicity, socioeconomic status, sexual orientation, disability status, and area of residence (rural/urban), which might influence mental health issues among the elderly.

Quality of Life

Psychological well-being is a crucial aspect of quality of life in individuals with Parkinson's. Depression, anxiety, apathy, and reduced quality of life frequently occur together and have a mutual impact on each other (Kuhlman, *et al.,* 2019). Early diagnosis of disease and management of symptoms significantly enhance the patient's quality of life. Involuntary movements accompany symptom management and involve periodical changes and professional use of medications (Kulisevsky, 2022). Motor symptoms such as bradykinesia, rigidity, tremor, and postural instability are critical characteristics of Parkinson's disease. These symptoms can significantly hinder movement and self-reliance, ultimately impacting the quality of life (Fereshtehnejad, *et al.,* 2015). As the illness develops, these symptoms typically become more noticeable, resulting in more impairment and restrictions in functionality. In reaction to the medicine, motor difficulties can significantly interfere with the patient's daily routines and overall well-being (Radder, *et al.,* 2016).

Non-motor symptoms like cognitive impairment, autonomic dysfunction, and sleep difficulties also add up to the total burden

of Parkinson's disease and have a detrimental effect on the quality of life (Martinez-Martin, *et al.*, 2015). These symptoms are frequently not acknowledged or addressed adequately, which worsens patients' distress and diminishes their quality of life. The effectiveness of treatment dramatically impacts the quality of life in Parkinson's disease patients. Although drugs like levodopa and dopamine agonists might offer immediate relief and enhance functionality, they may lead to long-term issues such as motor fluctuations and dyskinesias, reducing the effectiveness of treatment and quality of life (Stocchi, *et al.*, 2018). Furthermore, surgical procedures such as deep brain stimulation (DBS) have shown effectiveness in treating motor problems in advanced PD, thus improving quality of life (Weaver, *et al.*, 2020).

Activities of Daily Living

Virtual reality (VR) and motor imagery (MI) combined with regular physical therapy (PT) led to notable enhancements in motor control and Activities of Daily Living in Parkinson's disease patients when compared to physical therapy (PT) alone (Kashif, *et al.*, 2022). Studies have shown that PD patients experience improved motor symptoms, reduced drug requirements, enhanced quality of life, and more independence in activities of daily living when treated with deep brain stimulation (DBS)(Malek, 2019). There were notable disparities in activities related to daily living and motor assessment, except for cognitive function, behaviour, and emotional state (De La Cruz, 2017). A study indicates that the task-based Lee Silverman Voice Treatment-BIG (LSVT-BIG) programme, involving activities chosen by participants, could be a successful intervention for enhancing hand function, activities of daily living (ADL), psychological well-being, and quality of life in people with Parkinson's disease. (Choi & Kim, 2022). Implementing dietary intervention programmes for Parkinson's patients utilising the Controlling dietary Status score to enhance their everyday functioning (Nagano, *et al.*, 2021).

Cognitive Decline

Cognitive dysfunction is a common non-motor symptom of Parkinson's disease. It leads to Parkinson's disease dementia (PDD),

which might be more challenging for patients and their carers compared to the typical movement issues associated with Parkinson's disease (Lawson, *et al.,* 2016). Significantly, alterations in cognitive performance were not restricted to a single cognitive domain,and earlier diagnosis indicates a gradual diverse decline in cognitive performance in Parkinson's disease. (Broeders, *et al.*,(2013) found the most significant impact in the language and visual-spatial areas after five years.Research on spontaneous speech production and naming issues has been limited, but they have been associated with cognitive impairment. Extensive cohort studies with comprehensive neuropsychological test batteries, including all cognitive areas, are required to further our knowledge of the normal progression of cognition in Parkinson's disease. Reports should provide initial and follow-up data to allow researchers to assess the development of cognitive function across time (Roheger, *et al.,* 2018). Focusing on specific symptoms in the early stages of PD is crucial rather than waiting for the patient to disclose those (Ding, *et al.,* 2015). Also, among the neuropsychiatric symptoms, cognitive decline, apathy, depression, anxiety, and impulse control disorders are considered to be the most widely spread conditions in Parkinson's disease (Weintraub, *et al.,* 2022). Recent studies that report neuropsychiatric symptoms state that cognitive skills are negatively impacted in Parkinson's patients (Jones, *et al.,* 2019).

Social Interaction

Social interaction plays a significant role in the enhancement and well-being of an individual's life. Communication is a significant part of social interaction, and due to memory deterioration and speech difficulties, the social interactions of PD patients might be reduced (Sapir, *et al.,* 2011). Social dysfunction occurs in patients diagnosed right before the early onset of the disease (Porcelli, *et al.,* 2019). Also, Studies indicate that Parkinson's disease impacts social role functioning, affecting overall happiness and quality of life, including partner relationships, friendship, and employment (Perepezko, *et al.,* 2019). Social role is significantly associated with poor health-related - quality of life (Van Uem, *et al.,* 2016). Also, it was found that facial

masking was linked to social functioning issues like social rejection, although these connections and frequencies are weakened when accounting for depression (Gunnery, *et al.,* 2016). Persons living with Parkinson's (PWP) disease disclose that they experience shortened socialization and draw boundaries for a patient to be outgoing and to have a "purposeful" life directed towards satisfaction (Dauwerse, *et al.,* 2014). Chronic inflammatory demyelinating polyneuropathy (CIDP) often affects social functioning and night-time sleep, significantly reducing health-related quality of Life (Englezou, *et al.,* 2023).

Social Support

Social support is a key factor in driving the life of a human; it is essential to seek support societally from family members, friends, and close relationships for the betterment. It is established that the lessened social support might lead to depressive symptoms (Northcott, *et al.,* 2016). Addressing the caretaker's burden in Parkinson's disease is crucial as informal caregivers play a vital role in ensuring the well-being of individuals with PD, experiencing financial, social, and personal sacrifices. Not recognizing and dealing with the carer burden might result in burnout and early institutionalization of individuals with PD (Mosley, *et al.,* 2017). Some evidence shows that there is a high prevalence among PD patients who failed to seek care and support from their family members and are exposed to anxiety and depressive symptoms (Shao, *et al.,* 2020); there is also a positive impact among Parkinson's disease affected elderly patients who seek social support based on the age, the younger group seek more support than the older group. It might vary based on gender, disease severity, disease duration, and intensity of Parkinson's disease (Saeedian, *et al.,* 2014).

Results and Discussions

Mental health and ageing play an inevitable role in the life of an individual affected by Parkinson's disease (PD). PD is a neurodegenerative disorder that affects the motor and nonmotor functions of the brain. PD is more common in older adults, and age

is the most significant risk factor for the development and progression of PD. Ageing affects many cellular processes predisposing to neurodegeneration, such as oxidative stress, mitochondrial dysfunction, inflammation, and protein aggregation.

One of the significant challenges of living with PD is the impact of mental health on the quality of life of patients and their care partners. Even the emotional and social connectivitybetween thecaregivers and patients might have a severe impact. (Damier, *et al.,* 2022)

PD can cause various neuropsychiatric symptoms, such as depression, anxiety, apathy, impulse control disorders, and psychosis. These symptoms can occur at any stage of the disease and often go unrecognized and untreated. PD medications, sleep disorders, fatigue, and other factors can also influence them.

Mental health is essential to overall health, and it is vital to seek help if the neuropsychiatric symptoms interfere with normal functioning. There are different ways to address mental health issues in PD, such as counselling, lifestyle adjustments, changing PD medications, or adding other medications. Mental health care should be tailored to each individual's needs and preferences and involve the patient and the care partner.

Conclusion

In conclusion, mental health is a crucial aspect of quality of life for patients with Parkinson's disease (PD), as they face various neuropsychiatric symptoms that affect their mood, motivation, cognition, and behaviour. These symptoms can be caused by the neurodegenerative process of PD, the complications of PD treatment, or the psychosocial impact of living with a chronic condition. Moreover, ageing can exacerbate the vulnerability of the brain to PD pathology and worsen the clinical outcomes. Therefore, it is essential to assess and address the mental health needs of patients with PD and their care partners, using evidence-based interventions that can improve their well-being and functioning. Mental health and Parkinson's disease are interrelated and require a holistic and multidisciplinary approach to care.

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Relationship between Body Balance and Nutritional Status in Indian Elderly

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ABSTRACT

This study aimed to find whether body balance differs with nutritional status among the elderly. Eighteen thousand nine hundred twenty-three elderly individuals from the Longitudinal Aging Study of India, 2020, were selected for the study. A semi-tandem test and gait speed were selected as parameters of body balance, and the body mass index was used to indicate nutritional status. One way ANOVA and post hoc analyses were performed significant difference ($P<0.001$) in body balance were observed among groups of elderly individuals; the grouping of the elderly was made based on their nutritional status based on BMI. The study revealed that nutritional status can be essential in maintaining appropriate body balance among the Indian elderly.

Keywords: Body balance, Nutritional status, Gait speed, Semi tandem, Indian elderly

Population ageing is a continuous process and can be termed, when there is a gradual increase in the number of older persons in a population due to demographic transition (UNDESA, 2023). In India, the vast improvements in the health sector over decades not only increased the life expectancy of its people but also led to population ageing in the country (Agarwal, *et al.,* 2020). As a result, India expects to have 23 crore elderly persons by 2036, which was 10 crore in 2011 (GoI, 2020). To utilize the large proportion of the elderly population as human resources, disseminating the concept of productive ageing is required (Irshad, *et al.,* 2023). The term productive ageing is the concept that considers the elderly as an asset rather than a burden by involving them in productive activities (Visaria & Dommaraju, 2019).

Body balance and posture are crucial for performing daily activities and tasks in old age (Hayashi, *et al.,* 2012). The imbalance in body oscillation increases with an increase in age, which makes the elderly more prone to the loss of body balance compared to young adults (Bianchi, *et al.,* 2020). Decreased muscle strength and body balance exert postural instability that often leads to incidents of falls, both fatal and non-fatal (Cobb, *et al.,* 2014). Fall is one of the most significant health problems among the elderly and is not often considered. According to the World Health Organization (WHO 2000), every year, nearly 7 lakh people die from falls and fall-related injuries worldwide, and persons aged 60 years or more are the greatest victims (WHO, 2021). Just like fatal falls, non-fatal falls also victimize elderly persons with hospitalization and surgery, increasing health expenditure and often leading to dependence on others, thereby increasing disability-adjusted life years (Menon *et al.,* 2019; Yadav *et al.,* 2022).

Nutritional status is a multidimensional approach encompassing-dietary consumption, utilization of nutrients, and body composition, with functional, health, social, and economic determinants (Tucker, 2016; Maseda *et al.,* 2016; Banerjee *et al.,* 2022). Adequate nutrition is required for optimum functioning of body muscles and to compensate for the nutrient loss (Chatterjee, *et al.,* 2017; Jafari Nasabian, *et al.,*

2017). Optimum nutritional status not only helps in maintenance of body function or performing daily activities but also helps in maintaining appropriate body balance (Sawada, *et al.,* 2021; Banerjee, *et al.,* 2021). Although there is no gold standard for the assessment of nutritional status, Body Mass Index is frequently used worldwide for indication of nutritional status (Kuzuya, 2021; Santra, *et al*., 2021). Body Mass Index or BMI serves as an indicator of nutritional state in cases of both under nutrition (i.e., lower than adequate weight) and over nutrition (i.e., overweight and obesity) and also indicates the increasing risk of metabolic complications (Longo, *et al.,* 2019; Minagawa & Saito, 2021; Banerjee, *et al.,* 2021b). Against this backdrop, this study aims to find whether body balance differs with changing nutritional status among the Indian elderly.

Method

The present study used the Longitudinal Aging Study of India (LASI) dataset, Wave I, 2020, carried out all over India from 2017-2018. The data were collected by trained professionals using standard procedures and following the stratified multi-stage area cluster sampling method. From 72250 LASI respondents, the present study selected only elderly individuals of both sexes aged 60-70 years – i.e., 21245. From 21245 elderly individuals, individuals, whose data were not available concerning BMI, semi-tandem test, and gait speed had to be excluded, resulting in a final set of 18923 elderly individuals.

Procedure

The data available on the BMI of the elderly individuals were categorized into five groups, namely underweight (BMI<18.5), normal (18.5-22.9), at-risk (23.0-24.9), obese-I (25.0-29.9) and obese-II ($\geq$ 30.0), as recommended by WHO (2000) for South Asians. After the categorization, it was found that, among the 18923 elderly individuals, 3404 (17.99%) were underweight, 6938 (36.66%) were normal (average), 2875 (15.19%) were at risk, 4228 (22.34%) obese-I and 1478 (7.81%) were obese-II. The tandem test is a well-recognized tool for assessing body balance among the elderly that provides an early indication of body balance decline (Bergquist, *et*

al., 2019). Whereas gait speed also serve as an indicator of body balance as well as gait stability ratio, functional ability, and lower extremities function, and associated with the risk of falls among the elderly (Fan, *et al.*, 2016; Mehmet, *et al.*, 2020; Nascimento, *et al.*, 2022). The ability to perform semi tandem test (sec) and gait speed ($m.sec^{-1}$) were selected as body balance indicators, and analyses were carried out to find if the balancing ability changed with nutritional status inthe Indian elderly.

Statistical Analysis

All statistical procedures were performed using SPSS 29.0 Gradpack advance. One-way ANOVA was performed separately for both semi-tandem and gait speed to understand possible differences in body balance with changing BMI. After getting significant ($P<0.001$) differences, Games-Howell post hoc analysis was performed.

Results

The study consisted of 18923 elderly individuals, 47.53 percent of whom were males and 52.47 percent were females. The average age of the individuals was 64.57±3.25 years (AM±SD). Among the elderly individuals, 17.9 percent were undernourished, 36.6 percent had normal nutritional status, and 45.3percent were at risk of developing metabolic complications. The results of one-way ANOVA conducted between BMI, semi-tandem, and gait speed (performed separately) are presented in Table 1.

Table 1

The differences in influencing factors (nutritional status as depicted by BMI groups) in performing body balance tests (semi-tandem and gait speed)

Body Balance performance indicator	**Significance**
Semi tandem test (sec)	F=10.524 P<0.001
Gait speed($m.sec^{-1}$)	35.120 P<0.001

The multiple comparisons between BMI groups and the ability to perform semi-tandemduration in seconds have been presented in Table 2.

Table 2

Comparison between groups (categorized as per BMI) in terms of duration in seconds of the ability to maintain body balance in a semi-tandem position

Groups being compared		Difference between meansconcerning duration (sec) of maintaining the body balance in a semi-tandem position	Significance level (P)	95% Confidence Interval	
				Lower Bound	Upper Bound
Underweight	Normal	**0.08639***	<0.001	0.1475	0.0253
	At risk	**0.12586***	<0.001	0.1925	0.0592
	Obese I	**0.10400***	<0.001	0.1688	0.0392
	Obese II	0.00891	0.999	0.1071	0.0893
Normal	At risk	0.03947	0.181	0.0885	0.0096
	Obese I	0.01762	0.840	0.0642	0.0289
	Obese II	0.07747	0.109	0.0098	0.1647
At risk	Obese I	0.02186	0.799	0.0317	0.0754
	Obese II	**0.11695***	0.004	0.0258	0.2081
Obese I	Obese II	**0.09509***	0.032	0.0053	0.1849

*. The mean difference is significant at level, $p < 0.05$.

Out of 10 comparisons made between groups of elderly individuals belonging to different categories of nutritional status, indicated by BMI values, in respect of the average duration of ability to maintain body balance, it can be observed that in 5 cases there is significant ($P< 0.05$) difference. Individuals with malnutrition, like underweight (BMI< 18.5) categories, are found to have more differences from other categories.

The multiple comparisons between BMI groups and gait speed ($m.sec^{-1}$) have been presented in Table 3.

Table 3

Comparison between groups (categorized as per BMI) in terms of gait speed (m.sec-^{1})

Groups being compared		Difference between means concerning gait speed (m.sec-^{1})	Significance level (P)	95% Confidence Interval	
				Lower Bound	Upper Bound
Underweight	Normal	**0.03796***	<0.001	0.0490	0.0269
	At risk	**0.04804***	<0.001	0.0614	0.0347
	Obese I	**0.05327***	<0.001	0.0678	0.0387
	Obese II	**0.02153***	0.004	0.0383	0.0047
Normal	At risk	0.01008	0.125	0.0217	0.0015
	Obese I	**0.01531***	0.011	0.0283	0.0023
	Obese II	**0.01643***	0.032	0.0009	0.0319
At risk	Obese I	0.00523	0.875	0.0202	0.0097
	Obese II	**0.02651***	<0.001	0.0093	0.0437
Obese I	Obese II	**0.03174***	<0.001	0.0136	0.0499

*The mean difference is significant at level, $p < 0.05$.

Out of 10 comparisons made between groups of elderly individuals belonging to different categories of nutritional status, indicated by BMI values and the average gait speed, it can be observed that in 8 cases, there is a significant ($P< 0.05$) difference. Individuals having extreme forms of malnutrition, like underweight (BMI< 18.5) and obese II (BMI $\geq$ 30.0) categories, are found to have differences from all other categories.

Discussion

Due to several reasons, the fraction of the elderly Indian population is on the rise with a simultaneous increase in the cost of healthcare; incidences of falls definitely contribute a part in the latter. The analysed information presented in Table 2 indicates that Indian elderly with undernutrition have significant ($P<0.05$) differences in the ability to maintain balance in semi-tandem position, one of the two

chosen indicators of body balancing ability. With increased BMI, the issue of the inability to maintain body balance in a semi-tandem position is being addressed. It is more pronounced when the comparison is made in terms of gait speed, the other indicator of body balance maintaining ability; Indian elderly individuals with either form of compromised malnutrition, i.e., undernutrition and obesity type II, having significant ($P<0.05$) differences with individuals having normal nutritional status and not so extreme cases of malnutrition; the findings agree with studies conducted in elderly women, (Lee, *et al.,* 2020). It may hence be mentioned that nutritional status has repercussions on body balance in the Indian elderly; this is corroborated by earlier reports (Hall, *et al.,* 2012). The present observation that the ability to maintain balance as indicated by semi-tandem test and gait speed is possibly more convincing as it is based on analyses of more than 18000 elderly individuals' data compared to even, at times, conflicting reports with less than one hundred study participants.

Conclusion

The findings and discussions suggest that the ability to maintain body balance in the Indian elderly, as indicated by semi-tandem test performance and gait speed, significantly ($P<0.05$) differs with nutritional status denoted by BMI.

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