

A study of stress, anxiety, and depression in nursing home residents and non-residents

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Abstract

Background: The aging process begins at the age of 60 and is accompanied by several biochemical, physiological, anatomical, and metabolic changes. Transitioning into old age has serious medical, psychological, and social consequences. Given the significance of mental health in old age, the goal of this study was to compare stress, anxiety, and depression levels among nursing home residents and non-residents.

Methods: A census approach was used to choose 264 older persons for this cross-sectional study. Data was gathered using the Depression, Anxiety, and Stress Scale (DASS) questionnaire.

Results: The mean and standard deviation of the age of the elderly participants in the study were 69.64 ± 9.35 , with 202 (76.5%) females and 62 (23.5%) males. The study's findings revealed that the mean and standard deviation of stress in old people who are maintained at home were (11.28 ± 8.85), anxiety (10.45 ± 8.16), and depression (9.09 ± 8.25). The mean and standard deviation of stress, anxiety, and depression in nursing home residents are (17.18 ± 8.08), (18.08 ± 9.63), and (15.57 ± 10.97 , respectively. There was a significant difference in stress, anxiety, and depression levels between senior individuals living at home and those living in nursing facilities ($P < 0.001$).

Conclusion: According to the study findings, elderly people living in nursing homes had higher levels of stress, anxiety, and depression than those living in their own homes. As a result, long-term measures for lowering mental health difficulties in the senior population are critical.

Keywords: Stress, Anxiety, Depression, Mental Health, Elderly, Nursing home

Introduction

Significant advances in scientific and industrial fields, combined with increased life expectancy and declining fertility rates, have resulted in a rapid

global aging of the population, causing population pyramids to change shape from triangular to cylindrical (1). Aging is a life stage that begins at the age of 60 and is characterized by biological, physiological, anatomical, and biochemical changes

(2). According to World Health Organization estimates, the global elderly population will grow from 12% in 2015 to 22% in 2050, with the population of elderly people over 60 expected to exceed 2 billion this year (3). By 2050, more than 26 million Iranians will be elderly people over the age of 60 (4).

The onset of old age is associated with a loss of biological, physical, and mental capacity (5). Investigations into mental health issues affecting this population have revealed that mental health is a major concern among the elderly. During this stage of life, common complaints among the elderly include feelings of loneliness, fatigue, boredom, unimportance, and insomnia (6-8). Loneliness, rejection from family members, depression, and insecurity are all negative mental consequences of living in a nursing home (9,10). Depression is a significant result of the elderly experiencing these emotions (11).

Depression is estimated to affect between 25 and 50% of the elderly (12). Among the complications of depression in old age are a decline in performance, a decline in quality of life, a longer hospital stay, and death (13,14). Anxiety also becomes a common issue in old age as a result of various disabilities, decreased self-confidence, decreased activity levels, economic hardship, social isolation from friends and family, and the presence of chronic illnesses, making the elderly more vulnerable to anxiety (15). Stress also has an impact on the health of older adults by causing mental strain. Because the elderly have lived for a longer period, they have been exposed to more stressors such as economic, cultural, and social deficiencies, and they experience more stress than other age groups (16).

Many studies have been conducted on this subject, with consistent findings of high levels of stress, anxiety, and depression among the elderly. Physical ailments, medication routines, the loss of a spouse resulting in the absence of an emotional partner, separation from family members, reduced functionality, and contemplation of end-of-life issues and mortality are all factors that contribute to this phenomenon (17,18). Many of the elderly prefer to remain at home and live with family members (19). According to research, the elderly who live at home or with their families have better physical and mental health, as well as a longer life expectancy (9, 20). As a result, given the country's growing elderly population and the importance of mental health in old age, as well as the importance of where the elderly live in their mental health, the current study aimed to compare the levels of stress, anxiety, and depression among elderly residents and non-residents of nursing homes.

Methods

The current study is a cross-sectional study that compared the stress, anxiety, and depression status of elderly residents and non-residents of nursing homes in the province of Chaharmahal and Bakhtiari. The study population included elderly people living in their own homes in this province, as well as elderly residents of nursing homes in the same area. The sample size for this study was 264 people, chosen using specific inclusion criteria and the census method.

A person over the age of 60, a resident or non-resident of a nursing home, living in Chaharmahal or Bakhtiari province, willing to participate in the study, and able to speak and listen were all required to participate in this study. Exclusion criteria included severe and debilitating physical and motor disorders, severe mental and brain problems such as Parkinson's disease and dementia, and inability to carry out personal responsibilities.

Questionnaires were distributed after obtaining permission from the Shahrekord University of Medical Sciences and the Welfare Organization. According to their database, the Welfare Organization oversaw nine nursing homes in Shahrekord, Brojen (two boarding houses), Pirbaloot, Arjenak, Lordegan, Vardanan, Ben, and Kharaji.

The DASS21 questionnaire was used in conjunction with a demographic characteristics questionnaire that included items such as age, gender, education level, occupation, income, health status, place of residence, and marital status. Lotfizadeh (21) conducted a study in which the validity of the DASS21 questionnaire was confirmed at 83% (Table 1).

Seven questions were used to assess the three factors of stress, depression, and anxiety in this questionnaire. After reading each question, participants rated it on a 4-point scale from 0 to 3. It should be noted that the questionnaires were filled out by the interviewer, and any ambiguities in the questions were explained to the participants. They were also reminded that there were no correct or incorrect answers to the questions and that they should give the first answer that came to mind. The elderly participants in this study were assured that their questionnaire information would be kept private and used only for scientific purposes. Following the collection of data, statistical analysis was carried out using SPSS 22 (IBM SPSS Statistics, Chicago, IL, USA) and descriptive (mean, standard deviation, and frequency) and inferential (independent t-test) statistics. The Shahrekord University of Medical Sciences Research Ethics Committee (IR.SKUMS.REC. 92-10-30) approved the study protocol.

Table1. Depression, Anxiety, and Stress Scale (DASS) Severity Ratings

Severity	stress	anxiety	depression
Normal	0-14	0-7	0-9
Mild	15-18	8-9	10-13
Moderate	19-25	10-14	14-20
Severe	26-33	15-19	21-27
Extremely sever	+34	+20	+28

Table2. Demographic information of the research participants

Place of residence parameter		Home	Nursing home
Characteristics		Number(percent)	
income	Pension	40(38.7)	61(40.1)
	No income	65(58)	78(51.3)
	Non-government income	2(1.8)	12(7.9)
	Non-government income and pension	5(4.5)	1(.7)
job	housewife	60(53.6)	128(84.2)
	Retired	13(11.6)	12(7.9)
	self-employment	26(23.2)	12(7.9)
	Unemployed	13(11.6)	0(0)
Education level	Illiterate	79(70.5)	123(80.9)
	Didn't complete high school	30(26.8)	24(15.8)
	Bachelor's degree or higher	3(2.7)	5(3.3)
Marital status	married	64(57.1)	46(30.3)
	is dead	45(40.2)	96(63.1)
	Single	3(2.7)	10(6.6)

Table3. Frequency of diseases based on the place of residence

	Diabetes and HTN	Stroke-related movement disorders	Fractures	Neurologic /Psychologic	Hearing and visual	Genetic	Cardiac	Skeletal	No disease
	Number (percent)								
Home	31(27.7)	13(11.6)	0(0)	1(.9)	2(1.8)	1(.9)	4(3.6)	6(5.4)	54(48.2)
Nursing home	44(28.9)	13(8.6)	2(1.3)	17(11.2)	5(3.3)	6(3.9)	25(16.4)	23(15.1)	17(11.2)
Total	75(56.6)	26(20.2)	2(1.3)	18(12.1)	7(5.1)	7(4.8)	29(20)	29(20.5)	71(59.4)

Table 4. Mean and standard deviation of stress, anxiety and depression in elderly residents and non-residents of nursing homes

Variable	Minimum	Maximum	Mean \pm SD
Place of residence	Home		
stress	0.00	38.00	11.28 \pm 8.85
anxiety	0.00	34.00	10.45 \pm 8.16
depression	0.00	32.00	9.09 \pm 8.25
Place of residence	Nursing home elderly resident		
stress	6.00	40.00	17.18 \pm 8.08
anxiety	2.00	42.00	18.08 \pm 9.63
depression	0.00	60.00	15.57 \pm 10.97

Table 5. Independent t-test between in elderly residents and non-residents of nursing homes

variable	T	P. Value	95% confidence interval of the difference	
			Lower	Upper
stress	5.62	0.00	3.83	7.96
anxiety	6.76	0.00	5.40	9.85
depression	5.25	0.00	4.04	8.90

Results

The study included 264 elderly participants from the province of Chaharmahal and Bakhtiari. The participants' average age was 69.64 ± 9.35 years. 202 (76.5%) of the participants were female, while 62 (23.5%) were male. Descriptive statistics revealed that 80.9% of nursing home residents were illiterate, 15.8% had not completed high school, and 3.3% had a bachelor's degree or higher. Among 70.5% of the elderly kept at home were illiterate, 26.8% did not finish high school, and 2.7% had a bachelor's degree. The elderly who were kept in nursing homes were 84.2% housewives, 7.9% retired, 7.9% self-employed, and 0% unemployed. The elderly who were kept at home were 53.6% housewives, 11.6% retired, 23.2% self-employed, and 11.6% unemployed. In nursing homes, 40.1% of the elderly had pensions, 51.3% had no income, 7.9% had non-government income, and 0.7% had both pension and non-government income. 38.7% of the elderly kept at home received pensions, 58% received no income, 1.8% received non-government income, and 4.5% received both pensions and non-government income. In terms of marital status, 57.1% of the elderly cared for at home were married, 40.2% had died, and 2.7% were single. Furthermore, 30.3% of the elderly kept in nursing homes were married, 63.1% had died, and 6.6% were single (Table 2).

Diabetes and hypertension were the most common disorders in the study group (56.6%), followed by skeletal and fracture problems (1.3%), heart problems (20%), stroke and related movement disorders (20.2%), genetic disorders (4.8%), and vision, hearing, and nerve problems (5.1%). (Table 3).

Furthermore, the study's findings revealed that the mean and standard deviation of stress in elderly people who are kept at home were (8.85 ± 11.28), anxiety (8.16 ± 10.45), and depression (8.25 ± 9.09). The mean and standard deviation of stress, anxiety, and depression in nursing home residents are (8.08 ± 17.18), (9.63 ± 18.08), and (10.97 ± 15.57 , respectively (Table 4).

The independent t-test between elderly residents and non-residents of nursing homes in table 5 reveals a significant difference in stress, anxiety, and depression levels between elderly residents living at home and nursing homes ($P=0.00$). As a result of tables 4 and 5, it is clear that the elderly who are kept at home have lower levels of stress, anxiety, and depression than those who are kept in a nursing home.

Discussion

The current study aimed to compare the levels of stress, anxiety, and depression among nursing home residents and non-residents. Findings in two groups of nursing home residents and non-residents revealed a significant difference in the three components of stress, anxiety, and depression. This study adds to the growing body of research indicating that an elderly person's place of residence has a significant impact on their psychological well-being. Our findings are consistent with previous research (22-25), which has shown that older adults living in nursing homes have higher levels of stress, anxiety, and depression than those living at home.

These findings suggest that the elderly's living environment has a significant impact on their mental health outcomes. Lee also discovered in his research that the elderly's place of residence is an important factor in their health status and increase in life years (19). The social and emotional support provided by family and friends is one plausible explanation for the observed differences in psychological outcomes between nursing home residents and non-residents. The elderly who live at home frequently benefit from living in a familial environment, maintaining close relationships, and engaging in regular social interactions. These factors contribute to a sense of belonging, companionship, and support, which can act as stress, anxiety, and depression buffers (26). Family members' presence can provide a sense of purpose and responsibility, as well as opportunities to engage in meaningful activities and maintain a fulfilling lifestyle.

In a study conducted by Wurtman and colleagues (27), factors such as not having a close friend and communicating with him, feelings of loneliness and emptiness, and lack of individual independence were identified as negative effects of living in a nursing home. Because they see themselves as passive and dependent, the elderly in nursing homes appear to have higher levels of stress, anxiety, and depression than those living at home. Nursing homes are seen by the elderly as a place to waste time while they await death (28). As a result, being separated from family members, feeling incompetent and rejected by them, and not receiving attention and love can be the results of poor mental health.

It can be argued that a large part of the difference in psychological characteristics between the elderly in nursing homes and the elderly living at home is due to the fact that they do not benefit from being in a family environment and with their children. The presence of family members and communication with friends provides the elderly with a sense of belonging and efficiency, which can play a role in this disparity.

Limitations

The self-report questionnaire could have been biased. Individual differences in learning effectiveness, such as personal beliefs, psychological characteristics, interests, and so on, were beyond the researchers' control. Another limitation of this study is its cross-sectional design.

Conclusion

This study adds to the growing body of evidence that the place of residence has a significant impact on the psychological well-being of the elderly. As a result, long-term planning is required to minimize the problems caused by the elderly's mental health. It is suggested that appropriate health education models be used to implement effective interventions to improve these variables. The findings of this study also call for nursing home officials to pay attention to creating a happier environment for the elderly by doing group sports, holding problem-solving and reminiscence classes, going to nature, having fun, and providing assistance services.

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Conflict of Interests

The authors declare that they have no conflicts of interest.

Authors Contribution

ML, ZK, MS, and FF were responsible for the conception and design, data acquisition, data analysis, and data interpretation. The manuscript was written by ML and FF. ML and MS performed critical revision of the manuscript for important intellectual content as well as statistical analysis. ML, ZK, MS, and FF approved the final draft. The manuscript was read and approved by all authors.

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