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EFFECTIVENESS OF MINDFULNESS MEDITATION ON DEPRESSIVE SYMPTOMS AND LONELINESS AMONG OLDER ADULTS

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Abstract

Background: Aging may result in many physical and mental health challenges that need to be diagnosed and treated. Untreated mental illness is associated with many major health issues, which may be the cause of premature mortality. **Aim**: The study aimed to evaluate the effectiveness of mindfulness meditation on depressive symptoms and loneliness among older adults. **Design**: A quasi-experimental design with a pre and post-test was used to carry out the study's objectives. **Setting**: The study was conducted in El-Sadat Geriatric Home, Berket El-Saba Geriatric Home and Family Welfare Association Elderly Club in Shebeen El-Kom, Menoufia Governorate, Egypt. **subjects:** A convenience sample of all aged people who met the inclusion criteria was chosen (50 older adults). **Instruments**: consisted of three instruments Demographic data, The geriatric depressive symptoms scale (Arabic version), University of California, Los Angeles Loneliness Scale (UCLA): **Results:** The study found that 70% of the elderly studied had a moderate level of depressive symptoms, and 58% had severe loneliness. After mindfulness meditation, there was a high statistical improvement in the total depressive symptoms groups post-intervention ($p<0.003$), a highly significant improvement in the total loneliness groups post-intervention ($p<0.01$), and a highly significant association between post-intervention loneliness levels and post-intervention depressive symptoms levels among the studied elderly ($P<0.01$). **Conclusion:** Older adults who contributed to mindfulness meditation improved their depressive symptoms and reduced loneliness levels. **Recommendations:** The psychiatric nursing staff should implement a nursing intervention program for older adults who live in geriatric homes to improve their symptoms of depression and reduce loneliness levels.

Keywords: Mindfulness Meditation, Depressive Symptoms, loneliness, older adults.

Introduction

Public health is affected by the issues that come with aging, a natural process. Their vulnerability to physical and mental health disorders such as depression. It is increased when

specific biological and neurological risk factors are present **(Nakua et al., 2023).** According to projections made by the World Health Organization (WHO), other age groups' populations would decline while those aged 60 to 80 would double and quadruple in size over the next 30 years (World Health Organization **(WHO, 2021)**. It is well acknowledged that the demographic segment of older people is rising the quickest globally **(Sekher & Muhammad, 2023).**

Less social interaction and emotional support from family and friends are available to elderly people living in institutions, which may have an impact on their physical and mental health and lead to the development of severe depressive symptoms **(Saracino & Nelson, 2021)**. Aging depression is an additional significant issue among the elderly. A gloomy disposition, Symptoms of depression include diminished energy, loss of interest or pleasure, guilt or low self-esteem, disturbed sleep or eating, and difficulty concentrating. Depression is the third leading cause of disease and disability worldwide **(Mulugeta et al., 2023).**

A subjective emotional state known as loneliness might involve sentiments of being cut off, psychological distance, isolation, or a sense of not belonging or being accepted. Living alone or having no family ties, having fewer ties to one's culture of origin, losing friends, and the difficulties that come with making new ones are just a few of the characteristics that make older people more vulnerable to loneliness **(Saini et al., 2021).**

The use of interventions based on mindfulness is growing in popularity across the globe. Because mindfulness incorporates a variety of therapeutic approaches, such as deep breathing exercises, concentrating attention, acceptance without judgment and yoga, it is seen as a comprehensive therapy that helps reduce stress levels and enhance psychological well-being **(Komariahm et al., 2023)**. Mindfulness One method for easing the symptoms of mood in older people is meditation. Previous research shows that meditation programs are as effective as evidence-based therapies for older adults with psychiatric diagnoses in improving sleep, stress-related issues, anxiety, pain, and depression, and are superior to aerobic or resistance training for clinically depressed older (>65 years old) populations (**Miller et al., 2020).**

Mindfulness is defined as "the practice of moment-to-moment awareness without judgment; it is a meditative state focusing on one's presence; it is a cognitive state of self-awareness that invites emotional regulation and a shift in self-perspective" (**Felsted, 2020).**The psychiatric nurse plays a significant role in reducing older patients' feelings of loneliness, anxiety, and depressive symptoms through a variety of social and psychosocial therapies. Spending time with family, friends, and children is one example of a social intervention (**Aroh, Omobukola & Cabdulle, 2020).** Psychosocial approaches encompass various methods such as promoting physical activity via health education, employing problem-solving strategies as opposed to maladaptive coping mechanisms like avoidance, and utilizing relaxation techniques such as guided imagery, breathing exercises, meditation, and mindfulness (**Abdel Aleem et al., 2020).**

Significance of the study

In Egypt, the Central Agency for Public Mobilization and Statistics' most recent census revealed that 6.9 million people, or 6.6% of the population, were above the age of 60 **(Central**

Agency for Public Mobilization and Statistics; 2022). In later life, About 15% of all elderly people in the community, 60% of nursing facility residents, and attendants' elders in outpatient psychiatric clinics in Egypt had depressive symptoms. Elderly residents of El-Nahda city had a 52.1% prevalence of depressive symptoms, compared to 4.8% in Amer-village, Suez governorate (**Ahmed et al., 2022**).

The findings showed that elderly residents of long-term care facilities typically had high prevalence rates of loneliness (56% to 95.5%) and depression (11% to 85.5%) **(Elias, 2020)**.Mental health concerns including anxiety, loneliness and depression are ameliorated through consistent engagement in mindfulness practice. (**Reangsing et al., 2021).** Therefore, the present study aims to evaluate the effectiveness of mindfulness meditation on depressive symptoms and loneliness among the older adults.

Aim of the Study.

The study aimed to assess the effectiveness of mindfulness meditation on depressive symptoms and loneliness among older adults.

Research Hypotheses:

- Older adults who participate in mindfulness meditation program will have lower scores of depressive symptoms post-intervention than pre-intervention.
- Older adults who participate in mindfulness meditation program will have lower scores of loneliness post-intervention than pre-intervention.

Design:

The study followed a quasi-experimental design using pre-and post-test to achieve its objectives.

Setting:

The study was conducted in El-Sadat Geriatric Home, Berket El-Saba Geriatric Home and Family Welfare Association Elderly Club in Shebeen El-Kom, Menoufia Governorate, Egypt.

Subjects:

A convenience sample of all older adults who had the following inclusion criteria was selected

- **Inclusion criteria:** over the age of 60 and not presently enrolled in any other research studies, literate, authors consenting to participate in the intervention and no cognitive impairment.
- **Exclusion criteria** for the study included unwillingness to continue, recurrent absences from training, and cognitive impairment. The total sample size was fifty elderly individuals.

Study instruments

Data collection was conducted utilizing the subsequent research **Instrument 1**: A study questionnaire was developed by the researcher following a review of related literature.

It includes societal and demographic information such as level of education, gender, age, marital status, physical illness, income, occupation, emotional and physical problems, and chronic illnesses.

Instrument 2: The geriatric depressive symptoms scale (Version in Arabic)

It was accepted by Al-Asmari (2021). The Arabic scale was a valid and dependable instrument for evaluating geriatric depressive symptoms. There are fourteen items on the Likert scale, each with two possible responses ranging from zero to one. To compute the overall score, the sum of each component of the scale was utilized.0-5 means no or minimal depression, 6-10 means moderate depression, 11-14 means severe depression

Instrument 3: University of California, Los Angeles Loneliness Scale (UCLA): this scale was established by Russell version Three (1996), and Aung, Nurumal, and Bukhari (2017) adopted it, It was implemented to measure The state of loneliness. The researcher performed bilingual Arabic-to-English and back translation services. The participants assigned ratings of "Never," "rarely," "Sometimes," or "Often" to each item. The scores for each item are: never = 1, rarely = 2, sometimes = 3, and often = 4. Reversed items (never = 4, rarely = 3, Sometimes = 2, and often = 1) are (1-5-6-9-10-15-16-19-20). The sum of the individual scores was subsequently calculated to produce the total score. The assessment of the degree of isolation was predicated on the spectrum of the cumulative scores, which were delineated as follows: The following age groups are associated with varying degrees of loneliness: 20-34 for low loneliness, 35-49 for moderate loneliness, and 50-80 for high loneliness.

Instruments' validity and reliability

To ensure its initial validity, translation processes were utilized to back-translate the questionnaire into Arabic. The materials were allocated to a panel of five nursing experts, comprising professionals with backgrounds in administration, psychiatry, and community health. The evaluation of the surveys encompassed an assessment of their clarity, accuracy, relevance and completeness. The instruments were determined to be genuine in their view, and any necessary adjustments were made. The study found a Cronbach's α of 0.80 for the depressive symptoms scale and 0.82 for the loneliness scale.

A pilot study

A pilot study was conducted to evaluate the clarity of the research instruments and ascertain the necessary time to complete the questionnaire. Five subjects, or 10%, of the total sample size, were subsequently excluded from the research.

Ethical considerations

Official approval was obtained from the Research and Ethics Committee of the Faculty of Nursing, then the researchers obtained official approval from the relevant authorities in El-Sadat Nursing Home, Berket El-Saba Nursing Home, and Elderly Club, Shebeen

El-Kom. Menoufia. The study's purpose and the methodologies employed to collect data were elucidated. Written consent was obtained from the older adults under study after their being apprised of the study objectives and being provided with assurances concerning the confidentiality of the data gathered. Participants were apprised of their right to withdraw from the research at any given moment.

Field of work:

The study was completed between the onset of March and the end of July 2023. Members volunteered to participate.

Phase 1: Assessment (pre-testing) - This phase aimed to establish a connection between researchers and elderly individuals. while also explaining the study's purpose and intervention plan. In order to obtain a baseline assessment (pre-test), ten older individuals were categorized as such. The intervention was delivered to each group on alternate days twice per week for fifty weeks, during each session, which lasted approximately forty-five to sixty minutes, depending on the communication and comprehension skills of the elderly individual.

Phase 2: Planning phase: During this phase, mindfulness meditation training will be developed. It was developed in Arabic following recent literature reviews that were pertinent. This stage encompasses the following: Establishing the aims and substance of the mindfulness meditation instruction, which comprises: the concept of the older adults, stages of the older adults, problems that face older adults, definition of loneliness, causes of loneliness among older adults, definition of depression, Signs of depression, depression between the older adults, the concept of mindfulness meditation, Benefits of mindfulness meditation, Methods and activities for training in mindfulness meditation.

Phase 3: Implementation:

The intervention was conducted through a series of sessions that employed a diverse range of teaching methods and guides that were developed in advance. Sessions were conducted over the course of five weeks to determine the effects of mindfulness meditation training on the elderly. The overall goal of this program was to assess the effectiveness of mindfulness meditation in reducing depressive symptoms and loneliness in older persons.

Sessions are scheduled as follows:

Session 1: The purpose of the session was to motivate older persons to actively practice mindfulness meditation. This is achieved by introducing the researcher to the elderly, explaining the nature and aim of the study, as well as group rules like confidentiality.

Session 2: The goal of this session was to learn about terminology, issues that older

people face, the value of meditation, its advantages, and issues that mindfulness meditation can help with. The researcher used PowerPoint and a video to deliver.

Session 3: The goal of this session was to inform older adults about the definition, signs, and causes of loneliness. The researchers played a movie that exhibited depression symptoms along with the problems that come with loneliness and depression. The researchers asked them about their depression's causes and symptoms during this session. The display of realistic models of patients' depressive symptoms as well as the issues that these symptoms and loneliness bring about helped the participants**.**

Session 4: coping mechanisms for loneliness. Find a hobby, plan frequent social events, accept technology, participate in community activities, and When discussing feelings of loneliness with family, friends, or another reliable person, be truthful. Provide evaluations of the assignments from the preceding sessions. Encourage a loved one who is an older adult to concentrate on that.

Session 5: self-help tips for dealing with depressive symptoms.

Inform the older adults that depression symptoms can be reduced by engaging in both anaerobic (such as weightlifting) and aerobic (such as walking or running) workouts. Setting aside time for enough sleep, sticking to a regular sleep schedule, and prioritizing sleep are all examples of good sleep hygiene for depressive symptoms. Additionally, spending time in green spaces and other parts of nature might lessen the symptoms of depression and enhance cognitive function.

Session 6: Breathing Exercises

Since it can be done anywhere and at any time, mindful breathing meditation is very popular. Among these techniques is the belly breathing method. To achieve this, take a comfortable position and place one hand on your stomach and one on your chest. You can even lie down. Take a deep breath in, hold it for four seconds, and then release it slowly. Focus on the feelings in your chest, diaphragm, and hand.

Session 7: Mind Mapping

Being mindful Mind mapping is an excellent strategy for a senior with loneliness and depressive symptoms since it can help break down negative ideas or feelings into smaller, manageable chunks, preventing the elderly from feeling overwhelmed and encouraging them to handle things one step at a time.

Session 8: Guided Sleep Meditation

Redirecting focus from unpleasant thoughts to bodily sensations is the aim of guided sleep meditation. Your objective is to go to sleep more quickly and wake up feeling rested. Together with calming, spoken advice, mindfulness, and focused breathing techniques are combined in sleep meditation.

Session 9: (closure) The purpose of this session is to provide an overview of prior knowledge and get input on mindfulness meditation practices. After the sessions, the researcher commended the senior citizens who took part in the mindfulness meditation.

Evaluation phase

The post-test was carried out immediately at the end of the intervention period by using the same pretest (tools II and III).

Statistical Analysis: -

The data were entered and analyzed utilizing version 22 of the SPSS (Statistical Package for the Social Sciences) statistical package. The graphics were generated utilizing the Excel application. In presenting quantitative data, the mean (X) and standard deviation (SD) was utilized. It was analyzed utilizing a paired t-test for comparison between mean total depression pre and post-intervention, as well as for comparison between mean total loneliness pre and post-intervention, and ANOVA (F) test for comparison between more than two means.

Qualitative data were presented in the form of frequency distribution tables, numbers, and percentages. It was analyzed by chi-square (χ^2) test. However, if an expected value of any cell in the table was less than 5, the Fisher Exact test was used (if the table was 4 cells), or the Likelihood Ratio (LR) test (if the table was more than 4 cells).

For all significant tests, the level of significance was established as a P value less than 0.05.

Results

Figure 1 highlights the efficacy of mindfulness meditation on depressive symptoms among older adults. The total depressive symptoms groups exhibited a remarkably significant improvement ($p<0.003$) in post-intervention depressive symptoms. "No or minimal depression" responses rose from 14% pre-intervention to 20% post-intervention in the post-program group. In addition, the percentage of participants who reported "severe depression" decreased from 16% before the intervention to zero percent after the program, with a highly significant difference ($P<0.003$). In addition, the mean total score of depression decreased from 8.4 ± 2.2 pre-intervention to 6.7 ± 1.6 post-intervention and the difference was highly significant($P<0.0001$). Our finding provided support for the initial research hypothesis posited in this study." Older adults who participate in mindfulness meditation program will have lower scores of depressive symptoms post-intervention than pre-intervention.

Figure 2 demonstrates the efficacy of mindfulness meditation on Loneliness among older adults. Post-intervention Loneliness groups showed a highly significant improvement ($p<0.01$) in the total Loneliness groups. The reaction to "Low degree of Loneliness" in the post-intervention survey rose from 6% before the intervention to 20% after the intervention. Additionally, the "Moderate High Degree of Loneliness" response experienced a substantial reduction from 58% pre-intervention to 36% post-intervention; It was determined that this differentiation was highly significant. ($P<0.01$). Additionally, the mean total score of Loneliness decreased from 49.9 ± 7.8 pre-intervention to 45.5 ± 3.8 post-intervention and It was determined that this differentiation was highly significant($P<0.008$). The obtained result provided support for the second research hypothesis posited in this trial." "Loneliness scores among older adults who engage in

mindfulness meditation programs will be reduced in comparison to their pre-intervention levels."

Table 1 presented a highly significant association between post-intervention loneliness levels and post-intervention depression levels among studied elderly (P<0.01). Fifty percent of those who had a low degree of loneliness showed a low/minimal level of depression, while the other 50% of them showed a moderate level of depression. In addition, more than three-quarters of older adults who had a moderate degree of loneliness showed moderate depression (77.3%). Furthermore, all older adults who had a high degree of loneliness showed moderate levels of depression (100%).

Figure 3 demonstrated a strong highly significant positive correlation between the post-intervention total geriatric Loneliness score as an independent variable and the post-intervention total geriatric depression score as a dependent variable (r =0.37, p<0.0001).

Table 2 shows that there were non statistically significant differences among the older adults' Characteristics of the sociodemographic and the total score of post-intervention depression groups (p >0.05) for each item except gender which showed a significant difference between males older adults and females older adults regarding post-intervention regression groups (P<0.02). Female elderly are more likely to suffer from moderate depression than male elderly (95% vr 70%). In addition, one-third of male older adults suffer from No/minimal depression compared to only 5% among female older adults (30% vr 5%), and A statistically significant difference was observed (p<0.02).

Table 3: highlights that there were no statistically significant differences between the elderly's socio-demographic characteristics and the total score of the post-intervention loneliness groups (p >0.05) for each item. Employees who were elderly were more likely to suffer from a moderate degree of loneliness than retired elderly (100%); however, this difference was not significant statistically (P = 0.12). In addition, 70% of the elderly who live with their wives and children suffer from a moderate degree of loneliness than the elderly who live alone (70%); however, the difference was not significant statistically (p = 0.06).

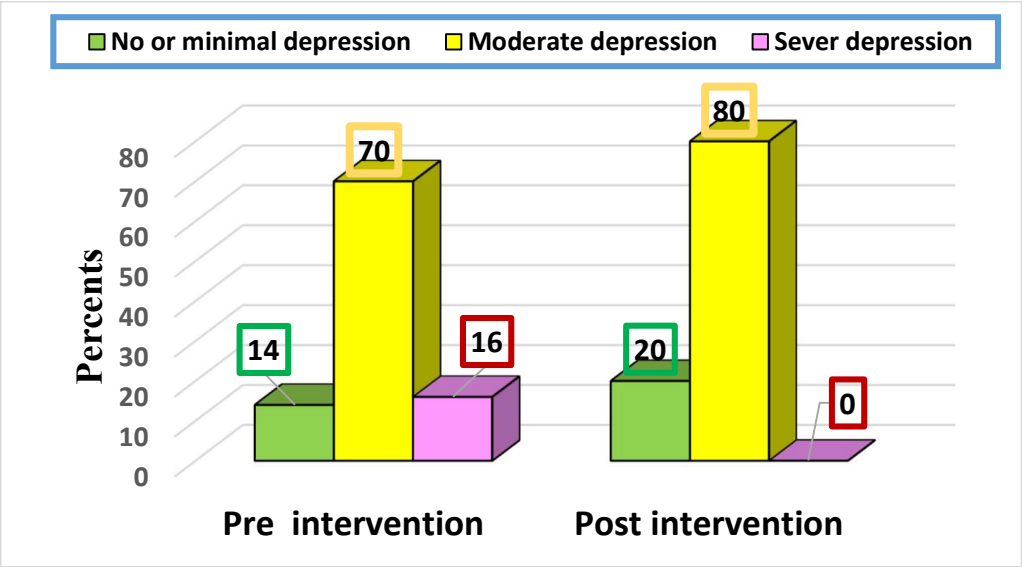

figure (1) Effectiveness of mindfulness meditation on depressive symptoms among older adults (N=50)

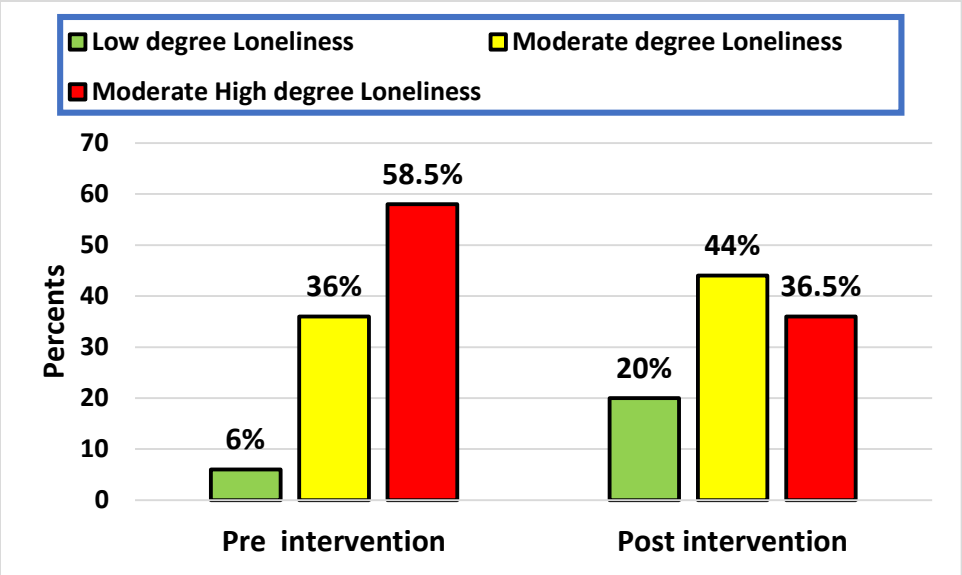

figure (2) Effectiveness of mindfulness meditation on loneliness among older adults (N=50)

Post-intervention Levels of Loneliness		Levels of depression post-intervention					
		Low/minimal depressive symptoms		Moderate depressive symptoms		Test of significance	P value
	Total*	N0.	%	N0.	%		
Low degree of Loneliness	10 (100%)	5	50	5	50	LR=5.9	<0.01 HS
Moderate degree of Loneliness	22(100%)	5	22.7	17	77.3		
High degree of Loneliness	18(100%)	0	0	18	100		
Total	**50(100%)**	10	20	40	80		

Table 1: Association between total geriatric Loneliness and total geriatric depressive symptoms among studied elderly post-intervention (N=50)

Table 2: Relation between some sociodemographic levels of studied elderly and their post-intervention depressive symptoms groups (N=50)

Total depressive symptoms levels post-intervention / Socio-demographic characteristics		Depressive symptoms post-intervention groups					
		No/minimal depression.		Moderate depression		Test of significant	
		N	%	N	%	X^2/ LR	P-value
Age (years)	50- <60 years(n=14)	1	7.1	13	92.9	LR=2.7	=0.26 NS
	60 – 70 years(n=21)	6	28.6	15	71.4		
	71 – 89 years(n=15)	3	20	12	80		
Gender	Male(n=30)	9	30	21	70	**LR=6.4**	**<0.02 Sig.**
	Female(n=20)	1	5	19	95		
Education	Illiterate/R&W(n=27)	3	11.1	24	88.9	LR=2.9	=0.08 NS
	Secondary school or a technical deplume (n=23)	7	30.4	16	69.6		

Job	Retired (n=32)	7	21.9	25	78.1	LR=0.43	=0.80 NS
	Employee(n=4)	1	25	3	75		
	Skilled worker (n=14)	2	14.3	12	85.7		
With whom the elderly live	Alone(n=4)	0	0	4	100	LR=5.5	=0.06 NS
	Wife & children(n=20)	7	35	13	65		
	Other family members(n=26)	3	11.5	23	88.5		
Total	N=50 (100%)	**10**	**20**	**40**	**80**		

Table 3: Relation between some sociodemographic levels of the studied elderly and their post-intervention loneliness groups (N=50).

Socio-demographic characteristics \ **Total loneliness levels post-intervention**		**Degrees of total Loneliness post-intervention**						**Test of significant**	**P value**
		Low		**Moderate**		**high**			
		N	**%**	**N**	**%**	**N**	**%**		**P-value**
Age (years)	50 - <60 Y(n=14)	2	14.3	7	50	5	**35.7**	LR=3.9	=0.68 NS
	60 – 70 Y(n=21)	6	28.6	10	47.6	5	23.8		
	71 – 89 Y(n=15)	2	13.3	5	33.3	8	53.4		
Gender	Male(n=30)	5	16.7	13	43.3	**12**	**40**	**LR=0.76**	**=0.68 NS.**
	Female(n=20)	5	25	9	45	**6**	**30**		
Education	Illiterate/R&W(n=27)	7	26	8	29.6	12	44.4	LR=5.02	=0.08 NS
	Secondary school or a technical deplume (n=23)	3	13	14	60.9	6	26.1		
Job	Retired (n=32)	7	21.9	12	37.5	13	40.6	LR=7.1	=0.12 NS
	Employee(n=4)	0	0	4	100	0	0		
	Skilled worker (n=14)	3	21.4	6	42.9	5	35.7		
With whom	Alone(n=4)	1	25	1	25	2	50	LR=8.40	=0.06 NS
	Wife & children(n=20)	2	10	14	70	4	20		

elderly live	Other family members(n=26)	7	26.9	7	26.9	12	46.2		
Total	**N=50 (100%)**	**10**	**20**	**22**	**44**	**18**	**36**		

Discussion

The aging of the population has an impact on the current societal transition. The forecast states that between 2000 and 2050, There will be a 22% increase in the proportion of individuals aged 60 and above, and There will be an increase in the population of individuals aged 60 and above from 605 million to 2 billion (Alam et al., 2023). Fewer social interactions from family and friend support are available to older persons living in institutions, which may hurt their physical and mental health and increase their risk of developing severe depressive symptoms. Suicidal thoughts, feelings of loneliness, and thoughts of death might result from severe depression (Saracino and Nelson, 2021). Therefore, the study's purpose was to define whether or not mindfulness meditation alleviated depressive symptoms and loneliness in old age. The results of the present study demonstrate a highly significant ($P<0.0001$) drop in the mean total score of depression from 8.4 ± 2.2 pre-intervention to 6.7 ± 1.6 post-intervention. This might be the result of mindfulness meditation, which aims to develop an accepting and open awareness of one's thoughts and feelings as well as an attentive attitude toward the thought patterns and physical experiences that arise during periods of acute anxiety or depression. This was consistent with the findings of the study "Can mindfulness-based stress reduction relieve depressive symptoms? “by Dang et al.,(2023).

According to a comprehensive study and meta-analysis, MBSR can considerably lessen each person's symptoms of depression. Various depression levels have an impact on the intervention's outcome. Furthermore, the intervention group that underwent the mindfulness treatment program exhibited a reduction in depressive symptoms. per a study by Komariah et al., (2023) who examined "Effect of Mindfulness Breathing Meditation on Depression, Anxiety and Stress and: A Randomized Controlled Trial among University Students.". Furthermore, research on "the Impact of Self-Compassion and mindfulness on depression and anxiety " by Pérez-Aranda et al., (2021) demonstrated that self-care and mindfulness can directly affect depressive symptoms. Souza et al., (2022) studied, "Effects of mindfulness practice in the elderly," however, indicated that there were no appreciable changes in the depressed symptom ratings after the mindfulness intervention.

The current study presented a highly significant association between post-intervention loneliness levels and post-intervention depression levels among studied older adults ($P<0.01$). This may be due to the transformation in their lifestyle in old age, which involved breaking ties with their friends and colleagues and a loss of status. Fifty percent of those who had a low degree of loneliness showed a low or minimal level of depression, while the other 50% of them showed a moderate level of depression.

In addition, more than three-quarters of older adults who had a moderate degree of loneliness showed moderate depression (77.3%). Furthermore, all older adults who had a high degree of

loneliness showed moderate levels of depression (100%). This research supports the findings of Banerjee et al., (2023) study, " Loneliness and Depression Among the Elderly in Low-Income and Middle-Income Nations," which demonstrates a strong correlation between the two conditions. Elderly people who report feeling lonely are much more likely than those who do not exhibit symptoms of depression: roughly 70% of the lonely versus 15% of the non-lonely. Zhang et al., (2023) study, " Social isolation, loneliness, depression and anxiety among the elderly in Shanghai," reported that an Increased incidence of depression was observed among the elderly who endured persistent loneliness. Additionally, a favorable association between loneliness and depressive symptoms was discovered by Abdel Aleem et al., (2020) in their study " With a highly statistically significant P value, "The Relationship between Loneliness, Anxiety, and Depressive Symptoms in the Elderly " was published. (0.001).

According to the results of the current investigation, the total loneliness groups demonstrated a highly significant development ($p<0.01$) in the total loneliness groups. The percentage of individuals reporting a low degree of loneliness increased from 6% pre-intervention to 20% shortly post-intervention. Furthermore, the percentage of individuals reporting moderate to high levels of loneliness decreased from 58% pre-intervention to 36% post-intervention, and this was a highly significant difference ($P<0.01$). This may be due to mindfulness practices that have appeared to improve communication, promote alertness, and empathy, improve mental and physical health, and reduce feelings of loneliness.

According to Xie et al., (2023) study, " Loneliness and Mindfulness among Chinese Seniors in Retirement: Mediating Effects of Positive and Negative Affect," loneliness and mindfulness were found to be negatively correlated ($r=-0.33$, $p < 0.001$). Similarly, Coutts Smith and Phillips (2023) found a significant negative correlation between loneliness and mindfulness in their study, " An Examination of the Interplay Between Loneliness and Psychological Distress via the Lens of Trait Mindfulness." Furthermore, five out of six (83%) of the research by Saini et al., (2021) titled " According to "The impacts of meditation on individuals experiencing loneliness: a scoping review," the level of loneliness was diminished through the practice of meditation.

According to the current study, the prevalence of moderate and high levels of depressive symptoms was 77%. This may be the result of the propensity for older individuals to undergo more intense periods of loss. This may include the demise of friends or family members, their health, their pets, or their residence. Although certain individuals may manage these challenging situations admirably, repeated bereavement and medical illness can alter the body's functioning, resulting in depressive symptoms. According to Mostafa and Ahmed's (2023) study, " Prevalence of depressive symptoms among the elderly utilizing primary care facilities in the governorate of Port Said," 49.4% of respondents overall reported having depressive symptoms, with women more likely than men (58.1% vs 32.8%). This result is consistent with their findings. Özer and Tanriverdi's (2023) study, "Determining depression, abuse, and neglect in elderly individuals," also revealed that serious depressive symptoms were present in 68.3% of older adults.

The current study revealed that 58% of the older adults had a high level of loneliness. This could be because their lack of trust in others, shyness, tension, anger, and fear of being abused

isolate them from society and heighten their feelings of loneliness and alienation. The obtained outcome aligns with the conclusions drawn by Solmi et al., (2020) who studied, " "Observational studies comprising a comprehensive umbrella review of factors associated with loneliness," which found that loneliness is more prevalent among the elderly. due to a decline in social ties, living alone, having limited functional mobility, having low income, and having poor health. Additionally, Gardiner et al., (2020) studied " What is the prevalence of loneliness among residential care homes and assisted living facilities occupied by older adults? The estimated mean prevalence of moderate and severe loneliness among the elderly was 31% and 65%, respectively. Furthermore, Zhang et al., (2023) revealed that among the elderly living in Chongqing, China, who are 60 years of age or older, the percentage of those experiencing moderate to severe loneliness is 4.7% and 14.1%, respectively.

There was insignificant difference between the sociodemographic characteristics of older adults and the total score of post-intervention depression groups, according to this study. ($p > 0.05$) for each item except gender which showed a significant difference between male older adults and female older adults regarding post-intervention regression groups ($P<0.02$). The prevalence of moderate depression among older women is 95%, whereas it is 70% among its male counterparts. This might be due to mood swings among females caused by hormonal changes throughout a woman's life. Golboni et al., (2022) studied "Prevalence of Depression among Iranian Older Adults: A Systematic Review and Meta-analysis of Observational Studies" discovered that the prevalence of depression was higher among women (50%; 95% CI: 42.3-69.7 vs. 42.2; 95% CI: 28.2-56.3) than among men. This trial is consistent with that research. Additionally, researchers (Bedaso, Mekonnen, and Duko, 2022) who conducted that women had a higher likelihood of developing depression than men, according to "A Systematic Review and Meta-analysis of Observational Studies" (50%; 95% CI: 42.3-69.7 vs. 42.2; 95% CI: 28.2-56.3). According to Manimehalai's (2014) study, " The Efficacy of Mindfulness Meditation in Alleviating Depression Among Senior Citizens in a Selected Coimbatore Senior Living Facility," there is an insignificant correlation between the degree of depression among senior citizens with specific demographic variables like gender and the post-test score of mindfulness meditation. This study's findings are incongruent with that research.

Regarding loneliness, the study discovered no statistically significant differences between the elderly's socio-demographic features and the total score of the post-intervention loneliness groups. This could be due to a tiny sample size. This finding contradicts Shovestul, Germine, and Dodell-Feder (2020), who investigated "Risk Factors for Loneliness: The High Relative Importance of Age versus Other Factors" and concluded that those who are female, have low socioeconomic status, are older, live alone, and live in a deprived neighborhood environment are much more vulnerable to loneliness. Additionally, Azeredo and Afonso (2016) investigated "Loneliness from the Perspective of the Elderly". They discovered a significant difference between loneliness levels and marital status, education level, and place of residence.

Conclusion

The results of the research indicated that among older adults, mindfulness meditation significantly and statistically reduced depressive symptoms and loneliness.

Recommendations

- The psychiatric nursing staff should implement a nursing intervention program for older adults who live in nursing homes to improve their symptoms of depression and reduce loneliness levels
- Potential future research directions include examining the impacts of Meditation mindfulness on larger samples of elderly individuals in a variety of settings.

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Conflict of Interest

The researchers of this study have disclosed no conflicts of interest

References

-Abdel Aleem ,Z.O., Al Nagar,A.M., Eita ,H.L.,& Shattla ,I.S.(2020) The Relationship between Loneliness, Anxiety Level and Depressive Symptoms among Elderly, International Journal of Novel Research in Healthcare and Nursing Vol. 7, Issue 1, p.p: (997-1010)

-Ahmed, H.A., El-Said, T.I., Mostafa, A.M., Youssef, I.M.(2022). Prevalence of depressive symptoms among elderly people attending primary health-care centers in Port Said Governorate, Egypt. Yemen J Med.

-Alam.H. F., Ibrahim, E.E., & El-Amrosy, H.S. (2023). Effectiveness of Logotherapy Training on Self-Esteem, Communication Skills and Impact of Event Among Older Adults. *International Egyptian Journal of Nursing Sciences and Research*, *3*(2), 486-505.

-Al-Asmari, A., & Abdullah. (2021). Geriatric depression scale, Saudi version. *Journal of Counseling Psychology,* 68(1), 67-98.

-Aroh, S., Omobukola, A., & Cabdulle, N. (2020). Nursing intervention in alleviating loneliness in elderly homes.

-Aung, K., Nurumal, M. S., & Bukhari, W. N. S. W. (2017). Loneliness Among Elderly in Nursing Homes. International Journal for Studies on Children, Women, Elderly And Disabled; 2: 72-8.

Azeredo, Z. D. A. S., & Afonso, M. A. N. (2016). Loneliness from the perspective of the elderly. *Revista Brasileira de Geriatria e Gerontologia*, *19*, 313-324

-Banerjee, A., Duflo, E., Grela, E., McKelway, M., Schilbach, F., Sharma, G., & Vaidyanathan, G. (2023). Depression and Loneliness among the Elderly in Low-and Middle-Income Countries. *Journal of Economic Perspectives*, *37*(2), 179-202.

-Bedaso, A., Mekonnen , N., & Duko, B. (2022). Estimate of the prevalence of depression among older people in Africa: a systematic review and meta-analysis. *Aging & mental health*, *26*(6), 1095-1105.

-Central Agency for Public Mobilization and Statistic Annual Report. Cairo: Central Agency for Public Mobilization and Statistic; 2022.
-Coutts-Smith, R.J.,& Phillips, J.W.(2023)The Role of Trait Mindfulness in the Association between Loneliness and Psychological Distress, Mindfulness (2023) 14:1980–1996.https://doi.org/10.1007/s12671-023-02184-7
-Ding, F., Wu, J., & Zhang, Y. (2023). Can mindfulness-based stress reduction relieve depressive symptoms? A systematic review and meta-analysis. *Journal of Pacific Rim Psychology*, *17*.
-Elias, S. (2020). Prevalence of loneliness, anxiety, and depression among older people living in long-term care: A Review. *International Journal of Care Scholars* (IJCS). 1(1), 39-43.
-Felsted, K. F. (2020). Mindfulness, stress, and aging. Clinics in Geriatric Medicine, 36 (4), 685-696. https://doi.org/10.1016/j.cger.2020.06.010
-Golboni, F., Mahmoodi, H., Baghi, V., Ghanei Gheshlagh, R., Valiee, S., Dalvand, P., & Kurdi, A. (2022). Prevalence of Depression among Iranian Older adults: A Systematic Review and Meta-analysis of Observational Studies. *Novelty in Clinical Medicine*, *1*(2), 70-80.
-Gardiner, C., Laud, P., Heaton, T., & Gott, M. (2020). What is the prevalence of loneliness amongst older people living in residential and nursing care homes? A systematic review and meta-analysis. *Age and ageing*, *49*(5), 748-757.
-Komariah, M., Ibrahim, K.,Pahria, T., Rahayuwati, L.,Somantri, I.(2023) Effect of Mindfulness Breathing Meditation on Depression,Anxiety, and Stress: A Randomized Controlled Trial among University Students. Healthcare 2023, 11, 26.https://doi.org/10.3390/ healthcare11010026

-Lee, Y.K., Kim, S.J., Hwang, N.H., Im, J.M.,Ju, B.H., Nangkung, E.H.,Lee, S.H., Jung, K.H., Kang, E.H.,& Kim, K.R.(2020) National survey of Older Koreans; Korea Institute for Health and Social Affairs: Seoul, Republic of Korea ; pp. 261–303.
-Manimehalai,R.(2014) Effectiveness of mindfulness meditation on depression among senior citizens in a selected old age home at Coimbatore.

-Miller, K.J., Gonçalves-Bradley, D.C., Areerob ,P., Hennessy, D., Mesagno, C., &Grace, F.(2020) Comparative effectiveness of three exercise types to treat clinical depression in older adults: A systematic review and network meta-analysis of randomised controlled trials. Ageing Res Rev. 2020; 58: 100999

-Mostafa, A., & Ahmed, H. (2023). Prevalence of depressive symptoms among elderly people attending primary health-care centers in Port Said Governorate, Egypt. *Yemen Journal of Medicine*, 37-43.
- Mulugeta , A., Azale, T., Mirkena, Y., Koye ,S.,Nakie, G., Kassaye, A., Dereje, J., Bedewi, N.,Dechasa, D.B., & Asfaw, H. (2023). Prevalence of depressive symptoms and their associated factors among older adults in Yirgalem town Southern Ethiopia: A community-based cross-sectional study. Front. Psychiatry 14:1148881.doi: 10.3389/fpsyt.2023.1148881

-Nakua ,K.E., Amissah,J., Tawiah,P., Barnie ,B., Donkor,P., & Mock,C.(2023). The prevalence and correlates of depression among older adults in greater Kumasi of the Ashanti region. BMC Public Health (2023) 23:763
https://doi.org/10.1186/s12889-023-15361-z
-Özer, N., & Tanriverdi, D. (2023). Determining depression, abuse, and neglect in elderly individuals. *Psychogeriatrics*.
-Pérez-Aranda, A., González-Quintela, A., López-del-Hoyo, Y., García-Campayo, J., Montero-Marin, J., Luciano, J. V.,& Feliu-Soler, A. (2021). *Impact of mindfulness and self-compassion on anxiety and depression: The mediating role of resilience [Impacto del mindfulness y de la autocompasión en la ansiedad y la depresión: rol mediador de la resiliencia]* (No. ART-2021-123974).
-Reangsing, C., Rittiwong, T., & Schneider, J. K. (2021). Effects of mindfulness meditation interventions on depression in older adults: A meta-analysis. Aging & Mental Health, 25(7),1181–1190.

-Russell, D .(1996). UCLA Loneliness Scale (Version 3): Reliability, Validity, and Factor Structure. *Journal of Pers Assess*; 66(1):20-40.
-Saini,G.K., Haseeb,S.B., Taghi-Zada,Z., & Ng,J.Y.(2021): The effects of meditation on individuals facing loneliness: a scoping review, Saini et al. BMC Psychol (2021) 9:88.https://doi.org/10.1186/s40359-021-00585-8

-Saracino, R. M., & Nelson, C. J. (2021): Identification and treatment of depressive disorders in older adults with cancer. *Journal of geriatric oncology*; 10(5): 680- 4.

- Sekher,V.T & Muhammad,T. (2023):Yoga/Meditation and Physical Exercises and Associated Cognitive Function Among Older Adults: Findings from Baseline Wave of the Longitudinal Aging Study in India. DOI: 10.1007/978-981-16-1914-4_162-1
- Shovestul, B., Han, J., Germine, L., & Dodell-Feder, D. (2020). Risk factors for loneliness: The high relative importance of age versus other factors. PloS one, 15(2), e0229087.
-Solmi, M., Veronese, N., Galvano, D., Favaro, A., Ostinelli, E. G., Noventa, V., Favaretto, E., Tudor, F., Finessi, M., Shin, J. I., Smith, L., Koyanagi, A., Cester, A., Bolzetta, F., Cotroneo, A., Maggi, S., Demurtas, J., De Leo, D., & Trabucchi, M. (2020). Factors associated with loneliness: An umbrella review of observational studies. *Journal of Affective Disorders*, 271, 131–138. https://doi.org/10.1016/j.jad.2020.03.075
-Souza, R. A., Ferreira, A. M., Alvarenga, M. R. M., & da Silva, A. L. N. V. (2022). Effects of mindfulness practice in the elderly.. *Global Academic Nursing Journal*, *3*(4), e302-e302.
-World Health Organization [WHO]. (2021). Social isolation and loneliness among older people: Advocacy brief.

-Xie,X., Qiao,X., Huang ,C.,& Cheung,S. (2023) Mindfulness and loneliness in retired older adults in China: mediation effects of positive and negative affect, Aging & Mental Health, DOI: 10.1080/13607863.2023.2240261
-Zhang, Y.,Kuang, J., Xin, Z., Fang, J., Song, R., Yang, Y., ... & Wang, J. (2023). Loneliness, social isolation, depression and anxiety among the elderly in Shanghai: Findings from a longitudinal study. *Archives of Gerontology and Geriatrics*, *110*, 104980.