Efficacy of Yoga-Nidra on Anxiety among Elderly People in Selected Old Age Homes

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ABSTRACT

BACKGROUND: Elderly individuals in old age homes often face significant stress, anxiety, and depression. Yoga-Nidra has been found to effectively reduce anxiety levels among these populations.

OBJECTIVES: The study aims to assess the level of anxiety among elderly people in selected old age homes, evaluate the efficacy of Yoga-Nidra in reducing anxiety.

MATERIAL AND METHODS: This quantitative research utilized a one-group pre-test and post-test design with a sample size of 50 participants, selected through a cluster sampling technique. The DASS-21 questionnaire was used to collect data on anxiety levels and demographic variables. Data were analyzed using descriptive and inferential statistics.

RESULTS: The results indicated a significant reduction in anxiety levels post-intervention. The pretest mean was 11.00 (SD = 3.528) with a t-value of 7.432 and a p-value of <0.0001. The post-test mean was 7.96 (SD = 2.231) with the same t-value and p-value. Significant associations were found between anxiety levels and sociodemographic variables such as education ($x2$ = 20.842, p = 0.0076), monthly income of the family ($x2$ = 11.311, p = 0.0035), and contact with family members ($x2$ = 16.773, p = 0.0102).

CONCLUSION: The study concluded that Yoga-Nidra is effective in reducing anxiety among elderly people in selected old age homes.

Introduction

Old-age homes are established to provide care and support for senior citizens, who often face psychological challenges such as loneliness, stress, anxiety, and depression. Aging is an inevitable part of human life, and the unwelcome process of growing older only emphasizes its importance. [1]Old age is the final stage of a person's life cycle, where psychological and emotional problems become more prevalent [1]. The United Nations defines an elderly person as someone who is more than 60 years old. The World Health Organization considers people elderly if they are 65 years or older. However, due to disparities in socioeconomic situations and life expectancy, in Africa, a person is considered elderly if they are 50 years or older (United Nations, 2012). [2]Reflecting these variations, the Maharashtra government in India has lowered the age limit for senior citizenship to 60 years from the previous 65 (RajkumarBadole, 2018). Generalized Anxiety Disorder (GAD) is a common form of anxiety among the elderly, affecting approximately 4% of the global population. Individuals with GAD are persistently worried about various aspects of life.[4] Health issues such as obesity, diabetes, childhood trauma, insomnia, and stressful conditions like the death of loved ones and financial insecurity can contribute to anxiety in elderly people [2]. Anxiety and mood disorders are estimated to impact over 25% of the global population. Swami SatyanandaSaraswati developed Yoga-Nidra in 1976 as a basic meditation practice accessible to people from diverse backgrounds and cultures, regardless of prior education. Yoga-Nidra is one of the most well-known practices for achieving complete physical, mental, and emotional relaxation. It is defined as an altered state of consciousness. Yoga-Nidra meditation involves Sankalpa, which is a resolution or intention that is personally meaningful and positively impacts the individual (e.g., "I am calm and relaxed" or "I am successful"). The goal of the resolution is to effectively

influence the unconscious mind to achieve the desired condition through continuous mental repetition. For regular practitioners, this goal is more significant than merely resting. Relaxation is essential for allowing the body and mind to release underlying stress.[6]Yoga-Nidra is a sequence of body awareness and breathing exercises that stimulate the parasympathetic nervous system and increase the number of alpha waves in the brain, facilitating deep relaxation [3]. Commonly referred to as "yogic sleep," Yoga-Nidra is a simplified version of an ancient tantric relaxation practice. The objectives of this study are to assess the level of anxiety among elderly people in selected old age homes, evaluate the efficacy of Yoga-Nidra in reducing anxiety, and examine the association between pretest anxiety scores and selected sociodemographic variables.

Background

A big problem all over the world is that people are living longer. This makes healthcare more difficult, especially when it comes to mental health issues. A lot of older people have mental health issues like worry, stress, and sadness, which get worse in institutional settings like old age homes. Even though the main goals of these organisations are to help and care for people, they may not always meet the social and mental health needs of the people who live there. A person's mental and emotional health can decline in old age, which is the last part of their life cycle. To improve their quality of life, these people need specialised treatments. A lot of older people around the world have problems with anxiety; about 4% of this age group has this problem. Generalised Anxiety Disorder (GAD), one of the most common types of anxiety, is marked by constant worry [4]. It is often linked to health problems like diabetes, obesity, and trouble sleeping, as well as stresses like the death of a loved one or not knowing how much money you will have in the future. Studies show that more than 25% of people in the world have anxiety and mood problems. This shows how important it is for older people to get effective mental health treatments. This is a global trend that affects the mental load of Indian seniors, which is made worse by culture standards and the economy. For example, the Maharashtra government has taken into account the complexities of getting older by dropping the age requirement for senior citizenship to 60. This is in line with life expectancy and quality of life issues in the area. This change makes it clearer how quickly problems with mental health should be fixed for older people, especially those who live alone or in institutions and don't have much or any family help. Swami Satyananda Saraswati created yoga-nidra in 1976 [5]. It is an old yogic technique that is becoming known as a natural way to treat mental health problems without any harm. Total physical, mental, and emotional rest is what the method is all about. It

uses a state of changed awareness to lower stress and worry. In Yoga-Nidra, which is also known as "yogic sleep," the unconscious mind is gently affected by Sankalpa, which is a personal vow. This method of meditation not only calms you down, but it also turns on your parasympathetic nervous system, which makes your alpha brain waves go up.

Yoga-Nidra is popular with seniors because it doesn't require much physical effort and can be done by anyone, even if they aren't very fit or have never meditated before. Research shows that Yoga-Nidra greatly reduces worry, stress, and sadness by getting to the root reasons of mental pain instead of just treating the symptoms. The study by Dr. Shivaji Pawar and Dnyeshwar Patil looks at how well Yoga-Nidra works to reduce worry levels in older people who live in some old age homes in Maharashtra [6]. The study uses a one-group pre-test and post-test method to look at Yoga-Nidra's effect on worry using the Depression, worry, and Stress Scale (DASS-21). The intervention is made up of 15-minute sessions every day for 15 days in a row. The lessons are meant to be consistent and easy to follow [7].

The findings of this study show that Yoga-Nidra can change the way older people think and feel, which is good for their mental health. Pre-test statistics showed that a lot of people were anxious; 76% of the people who took the test had mild anxiety and 20% had significant anxiety. But the results of the test afterward showed a big improvement: only 20% of the people who took it still had mild anxiety, while 36% had normal anxiety levels. Anxiety levels went down significantly, with mean scores going from 11.00 (SD = 3.525) on the pre-test to 7.96 (SD = 2.231) after the test. The study also talks about some important sociodemographic factors that cause worry, such as family income, schooling level, and how much time spent with family. This in-depth understanding of anxiety causes strengthens the case for customised and situation-based therapies like Yoga-Nidra.

Aspect	Details	Impact on Elderly	Yoga-Nidra Role	Study Relevance
Mental Health in Aging	Aging leads to psychological vulnerabilities such as anxiety, stress, and depression.	Elderly in institutional settings face isolation, financial insecurity, and loss of loved ones, worsenin	Yoga-Nidra offers relaxation and stress relief, addressing root causes of mental distress.	Highlights the need for effective interventions in old age homes.

		g anxiety.		
Global Prevalence	Generalized Anxiety Disorder (GAD) affects ~4% of the elderly globally.	Anxiety impacts over 25% of the global population, with conditions like diabetes and insomnia contributing.	Enhances parasympathetic activity and increases alpha brain waves, aiding mental relaxation.	Aligns with global health trends and supports non-invasive solutions.
Indian Context	Maharashtra reduced senior citizenship age to 60, recognizing socio-economic realities and life expectancy.	Institutional care often fails to address mental health adequately, leaving elderly vulnerable to anxiety.	Easily adaptable to elderly populations, requiring no physical exertion.	Emphasizes cultural and regional adjustments in elderly care.
Yoga-Nidra Technique	Developed by Swami Satyananda Saraswati (1976), involves guided meditation and personal resolutions (Sankalpa).	Creates an altered state of consciousness for emotional, physical, and mental relaxation.	Promotes holistic well-being by reducing stress and anxiety effectively.	Demonstrates accessibility and simplicity for diverse elderly demographics.
Study Design	Evaluated Yoga-Nidra's efficacy in old age	Anxiety levels dropped significantly post-intervention	Daily 20-minute sessions over 15 days resulted	Establishes evidence-based benefits of Yoga-
	homes using the DASS-21 scale for anxiety assessment.	on, from moderate /severe to mild/normal in most cases.	in statistically significant improvement.	Nidra for elderly anxiety management, supporting its broader application in institutional settings.

Materials and Methods

A quantitative research approach was employed in this study, utilizing a one-group pre-test and post-test research design. The study was conducted on 50 participants residing in two old age homes: Shivasambhu Vardhashram Seva Mandal Trust, located in Nerle, Tal-Walwa, Dist-Sangali, and Matoshri Vardhashram, located on the Mahagaon Satara Koregaon road, Tal &Dist-Satara. The dependent variable in this study was anxiety, while the independent variable was Yoga-Nidra. The old age homes were selected using a cluster sampling technique. Participants were chosen based on inclusive and exclusive criteria to ensure suitability for the study. Data collection at the Nerle old age home took place in February 2023, and at the Satara old age home, it occurred from June to July 2023.

Anxiety levels were measured using the DASS-21 scale (Depression, Anxiety, and Stress Scale). The intervention, Yoga-Nidra, was administered daily between 9 AM and 11 AM. Each Yoga-Nidra session lasted for 20 minutes and was conducted consecutively for 15 days. Post-test data were collected after the 15-day intervention period for all participants. Both pre-test and post-test data were analyzed using descriptive and inferential statistics to determine the efficacy of Yoga-Nidra in reducing anxiety among the elderly participants.

Description of the tool:

It has two sections

Section A: Sociodemographic Data

Demographic variables made such as Age, Gender, Marital status, Education, Religion, Residential area, Type of family, Monthly income of family, Occupation before admit to old age home, Period of staying in old age home, Contact with family members, Pensioner, Type of admission, financial dependency.

Section B: DASS-21 scale (Depression, Anxiety, and Stress.)

Inclusive Criteria:

Elderly people who are willing to undergo the YogaNidra program. Elderly peoplehave stress, anxiety, and depression in the pre-test.

Exclusive Criteria:

Elderly who are ill. Elderly with hearing impairment. Elderly who taking the medicine containing sedation. Psychiatric disorder patient.

Ethical Consideration:

Permission taken from the Ethical committee of KIMSDU, Dean/Principle of KINS. Manager of Shivasambhu Vardhashram Seva Mandal, trust, Nerle, Tal- walva Dist.- Sangali. and Manager of Matoshri Vardhashram, mahagaon satara koregaon road, Tal & Dist.-Satara.

Informed consent:

Before the data collection consent was taken from all the participants

Data collection procedure:

Data collection was conducted at two old age homes: Shivasambhu Vardhashram Seva Mandal, Nerle, Tal-Walwa, Dist-Sangali, and Matoshri Vardhashram, Mahagaon Satara Koregaon Road, Tal &Dist-Satara.

1. **Shivasambhu Vardhashram Seva Mandal, Nerle**:

   o **Time Frame**: Data collection occurred from 5 February 2023 to 22 February 2023.

   o **Pre-Test**: Conducted on 5 February 2023 using the DASS-21 scale to measure baseline anxiety levels.

   o **Intervention**: Yoga-Nidra sessions were administered from 7 February 2023 to 21 February 2023, daily between 9 AM and 11 AM. Each session lasted for 20 minutes and was conducted consecutively for 15 days.

   o **Post-Test**: Conducted on 22 February 2023 using the DASS-21 scale to measure post-intervention anxiety levels.

   o **Demographic Data**: Collected through a structured interview schedule during the initial assessment.

   o **Ethical Considerations**: Informed written consent was obtained from all participants. Ethical aspects were adhered to throughout the study.

2. **Matoshri Vardhashram, Mahagaon Satara Koregaon Road, Tal &Dist-Satara**:

   o **Time Frame**: Data collection occurred from 29 June 2023 to 16 July 2023.

   o **Pre-Test**: Conducted on 29 June 2023 using the DASS-21 scale to measure baseline anxiety levels.

   o **Intervention**: Yoga-Nidra sessions were administered from 1 July 2023 to 15 July 2023, daily between 9 AM and 11 AM. Each session lasted for 20 minutes and was conducted consecutively for 15 days.

   o **Post-Test**: Conducted on 16 July 2023 using the DASS-21 scale to measure post-intervention anxiety levels.

Both pre-test and post-test data were analyzed using descriptive and inferential statistics to evaluate the efficacy of Yoga-Nidra in reducing anxiety among elderly participants. The consistency and standardization of the Yoga-Nidra intervention were maintained across both old age homes.

Plan for Data Analysis:

Organizing data in the master sheet. Demographic characteristics were described in frequency and percentage. The chi-square test was used to find an association between anxiety and demographic variables

Results

Section I: Distribution of elderly people in old age homes according to sociodemographic variables.

n=50

SR. NO	SOCIODEMOGRAPHIC VARIABLE	FREQUENCY	PERCENTAGE
1.	**Age** •60-65yrs •66-70yrs •71-75yrs •Above 75	 17 15 15 3	 (34%) (30%) (30%) (6%)
2.	**Gender** • Male • Female • Third gender	 16 34 0	 (32%) (68%) 0
3.	**Marital Status** • Married • Others	 21 29	 (42%) (58%)
4.	**Education**		

	• Educated	23	(46%)
	• Illiterate	27	(54%)
5.	**Residential Area**		
	• Rural	29	(59%)
	• Urban	21	(42%)
6.	**Monthly Income of Family**	9	(18%)
	• 9308-27882	41	(82%)
	• ≤9307		
7.	**Occupation Before Admit to Old Age Home**	20	(40%)
	• Employed	30	(60%)
	• Unemployed		
8.	**Period Of Staying in Old Age Homes**	40	(80%)
	• **0-2 years**	10	(20%)
	• 2-5 years		
9.	**Contact With Family Member**	35	(70%)
	• Weekly	15	(30%)
	• Monthly		
10	**Types Of Admission**	11	(22%)
	• Voluntary	39	(78%)
	• Involuntary		

Table 1: Distribution of demographic variables showed that the majority of 17 (34%) were of the age of 60-65 & 15(30%) were of 66-70 yrs.34(68%) sample were of female & 16 (32%) sample were of male. Majority samples were of married 21(42%) & 16(32%) samples were of widow. Majority of were illiterate 27 (54%), and primary school certificates 15(30%) were found. The majority of 41(82%) samples were of less than 9307 rupees monthly income,9 (18%) samples of 9308 -27882 rupees monthly income category. The majority of old age people were from rural areas 29(58%) and 21 (42%) were from urban areas. The majority of samples 30(60%) were unemployed. The majority of samples were of 0-2 years staying in old age homes were 40 (80%).The majority of people who were in weekly contact with family were 35(70%).The majority of old age people samples were involuntary 39(78%).
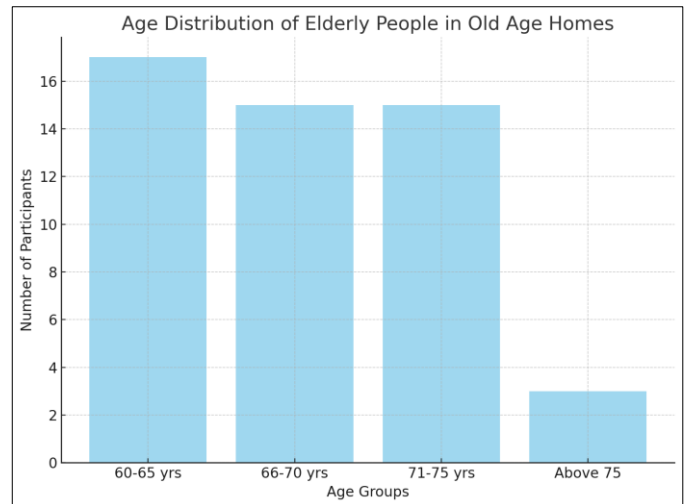
Figure 1. Age Distribution of Elderly People in Old Age Homes

The first graph displays the age distribution of elderly participants in the study. The majority of participants belong to the 60–65 years age group (34%), followed by the 66–70 years (30%) and 71–75 years (30%) categories, with only 6% aged above 75 years. This distribution highlights that the largest segment of the study population consists of younger elderly individuals, possibly reflecting demographic trends in institutional settings. The representation of all age categories ensures a diverse sample, which enhances the study's applicability across various elderly age groups.

Other sociodemographic variables in my study included-Religion, Type of Family, Pensioner, and Financial Dependency. (Note: -Marital status-others 29 (58%) includes unmarried, divorced, widow, widower. Educated variable included -Professional, Graduate or postgraduate, intermediate or post-high school diploma, high school certificate, middle school certificate, primary school certificate, employed include -Profession, Clerical shop-owner/farm, Skilled worker, Semiskilled worker, Unskilled worker. In contact with family, member variables include weekly (Daily, once in a week) and in monthly (monthly and not at all)

Table No: 2. Distribution of the level of anxiety among elderly people in selected old age homes.

n = 50

Anxiety	Scoring	Pretest	Post-test
Normal	0-7	00	18 (36%)
Mild	8-9	2 (4%)	22 (44%)
Moderate	10-14	38 (76%)	10 (20%)
Severe	15-19	10 (20%)	00
Extremely severe	20+	-	-
Total	-	50 (100%)	50 (100%)

Table 2 shows the comparison of the pretest and posttest of anxiety among elderly person old age homes**.** In the pretest before giving yoga Nidra, 2(4%) old age people had mild anxiety, 38(76%) had moderate anxiety, and 10(20%) had severe anxiety. In the post-test after administrating Yoga Nidra, 18(36%) samples found normal anxiety,22(44%) mild type of anxiety, and 10(20%) samples were of moderate type anxiety.
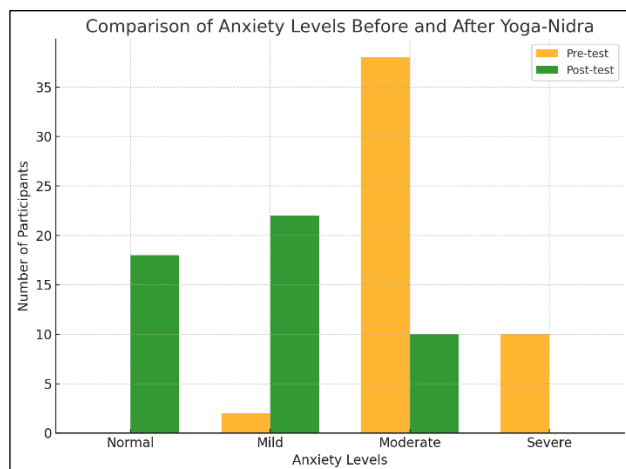

Figure 2. Comparison of Anxiety Levels Before and After Yoga-Nidra

The second graph compares the pre-test and post-test anxiety levels among participants, categorized into normal, mild, moderate, and severe levels. Before the Yoga-Nidra intervention, a significant number of participants exhibited moderate (76%) and severe (20%) anxiety. Post-intervention, there was a notable shift, with 36% achieving normal anxiety levels and 44% showing mild anxiety. This demonstrates the effectiveness of Yoga-Nidra in reducing anxiety across all severity levels, with no cases of severe anxiety remaining after the sessions.

Table No 3: Mean and SD of pre-test and post-test scores of anxiety among elderly people in selected old age homes.

n=50

TEST	Min	Max	Mean	SD	Mean Diff.	t value	p-value
PRE-TEST	6.000	18.000	11.00	3.528	3.048	7.432	<0.0001
POST-TEST	4.000	14.000	7.96	2.231			

Table No 3: This table indicates that Anxiety levels in the pretest mean score was 11.00 with SD 3.528 and posttest mean score was 7.96 andSD2.231.Paired t-test value was 7.432 and the 'P'value<0. 0001.It shows a significant difference in anxiety levels between pre-and post-test scores. Reducing anxiety statistically (p < 0.0001).
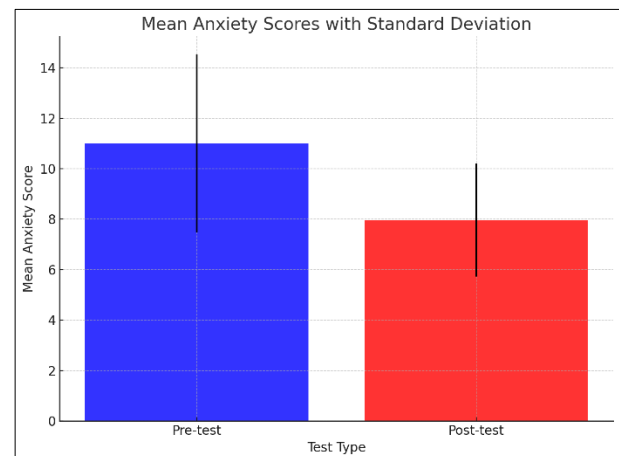

Figure 3. Mean Anxiety Score

The third graph presents the mean pre-test and post-test anxiety scores along with their standard deviations. The mean pre-test anxiety score was 11.00 (SD = 3.528), which decreased significantly to 7.96 (SD = 2.231) post-intervention. This reduction, combined with smaller variability in post-test scores, indicates a consistent improvement in anxiety levels among participants, underscoring the efficacy of the intervention.

Discussion

In my study, results revealed a significant decrease in anxiety levels among elderly residents in old age homes. Initially, the pretest data showed that 2

participants (4%) experienced mild anxiety, 38 (76%) had moderate anxiety, and 10 (20%) faced severe anxiety. Post-intervention, anxiety levels improved notably, with 18 participants (36%) exhibiting normal anxiety, 22 (44%) demonstrating mild anxiety, and 10 (20%) still showing moderate anxiety. The pretest mean anxiety score was 11.00 with a standard deviation of 3.528, yielding a t-value of 7.432 and a p-value of <0.0001. In contrast, the posttest mean score decreased to 7.96, with a standard deviation of 2.231, maintaining a t-value of 7.432 and a p-value of <0.0001. This indicates a statistically significant reduction in anxiety levels. Additionally, the study highlighted strong correlations between anxiety and various demographic variables, including education (x^2 = 20.842, p = 0.0076), monthly family income (x^2 = 11.311, p = 0.0035), and contact with family members (x^2 = 16.773, p = 0.0102).

A study conducted by Kalita J. revealed significant findings regarding anxiety levels. In the pretest phase, 7 participants (23.33%) exhibited mild anxiety, 5 (16.67%) had severe anxiety, and 3 (10%) experienced extremely severe anxiety. Following the intervention, the post-test results showed that 11 participants (36.67%) had moderate anxiety, 3 (10%) were categorized as having severe anxiety, and 1 (3.33%) had extremely severe anxiety. The pretest mean anxiety score was 15.600 with a t-value of 2.276 and a p-value of <0.0003. In the post-test, the mean score improved to 13.200, maintaining a t-value of 2.276 and a p-value of <0.0003. These results indicate that the reduction in anxiety was statistically significant, with p < 0.0003. [8]

An experimental study conducted by Kamble P, Daulatabad V. S., Tandra H., et al. examined the effects of Yoga Nidra training on anxiety levels. The study found a significant reduction in anxiety scores, decreasing from 12±3.41 to 5.80±2.56 (p<0.0001). Additionally, Beck's anxiety scores also showed a notable decrease from 23.75±1.86 to 20.83±0.73 (p<0.0001). These results demonstrate that Yoga Nidra effectively reduced both stress and anxiety, while also contributing to improved mental wellness. [9]

An experimental study conducted by Sharpe E, Butler M, Hanes D, and Ryan B in 2021, titled "Remotely Delivered Yoga Nidra for Insomnia and Anxiety during COVID-19," investigated the effectiveness of Yoga Nidra delivered remotely. Out of the 74 participants, 71% reported experiencing subthreshold insomnia, with an Insomnia Severity Index score of 14 ± 4, while 74% reported anxiety, with a Generalized Anxiety Disorder Index score of 10 ± 5. The study found a 41% reduction in state anxiety among 32 participants, and the State-Trait Anxiety Index (STAI) scores decreased from an average of 47 ± 11 before the practice to 27 ± 8 after, with a p-value of <0.0001. The results concluded that remotely delivered Yoga Nidra is effective in alleviating both anxiety and insomnia. [10]

Conclusion:

The study shows how common worry is among older people who live in nursing homes and how well Yoga-Nidra, a non-invasive treatment, can ease mental stress. A lot of the people who took part in the study at first reported mild to serious anxiety. This was linked to a number of psychological and social problems that come with getting older, such as feeling lonely, worrying about health, and losing touch with family. During yoga-nidra classes, participants' anxiety levels dropped statistically significantly; they definitely moved into the mild or average anxiety ranges after the intervention. The mean worry scores went down from 11.00 (pre-test) to 7.96 (post-test), which is supported by a very significant p-value (<0.0001). This shows that the strategy worked for everyone in the group. The study also pointed out the importance of sociodemographic factors like education level, income, and family contact, which were found to have strong links with worry levels. Based on these data, it seems that tailored mental health care that takes into account the unique past and experiences of older people may be very helpful. For older people, yoga-nidra can help improve their mental health because it is easy to do and available to everyone. Because it can help with physical comfort, mental balance, and deep sleep, it's perfect for this sensitive group. It's also flexible for different people and doesn't have any bad effects, which makes it more appealing as a long-term mental health treatment.

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