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Research Article

An Experimental Study To Assess The Effectiveness Of Humor Therapy On Depression And Quality Of Life Among The Elderly

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Abstract

Background

Several studies have demonstrated that humor therapy helps maintain balance across the biological, psychological, social, and cultural dimensions of life in older adults. Purposeful laughter fosters greater happiness and enhances overall well-being. Evidence further suggests that humor therapy can significantly reduce depression and thereby improve the quality of life among the elderly.

Methodology

A true experimental two-group pre- and post-test design was employed in selected community areas and old age homes of Sabarkantha district, Gujarat. A total of 200 elderly individuals (≥60 years) with depression, residing in the selected settings, were recruited through purposive sampling and equally assigned to experimental and control groups. The experimental group received humor therapy sessions three times per week for three weeks, whereas the control group received standard care. Data were collected using a validated tool developed with expert input (Cronbach's $\alpha = 0.84$), along with standardized instruments including the Geriatric Depression Scale and the WHO Quality of Life Scale. Statistical analysis was performed using descriptive and inferential methods, including paired and unpaired t-tests and Chi-square tests. Ethical approval was obtained from the Medistar Hospital Ethics Committee (Approval No. P.NO/EC/04/2024).

Results

post-intervention the experimental group demonstrated a significant reduction in depression scores (from 18.76 ± 2.89 to 10.9 ± 1.78; $p < 0.05$), compared to only a marginal change in the control group. Fifty-nine percent of participants in the experimental group achieved normal depression score. The experimental group also reported significantly better quality of life scores (55.96 ± 5.93) than the control group (42.40 ± 6.28; $p < 0.05$). Furthermore, favourable attitude toward humour therapy (higher rates of quality of life and reduce depression score) and improved outcomes were more common in the experimental group. Depression levels were significantly associated with age, sex, marital status occupation, income, religion, and sources of information.

Conclusion

The humour therapy reduced depression level enhanced positive attitude toward humour therapy, improved quality of life experiences. These findings advocate for the humour therapy should be integrated into routine old age people care to promote psychological wellbeing and enhances coping ability for dealing with depression situation and improves quality of life.

Keywords: Humo therapy, depression, elderly people, quality of life, old age home, community areas.

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Introduction

"A smile is the shortest distance between two people" – Victor Borge. Aging is a natural process that often increases the risk of depression among the elderly due to physiological, psychological, and social changes. With the elderly population rapidly increasing both globally and in India, mental health has become an important concern. Humor and laughter are safe, non-invasive interventions that can alleviate depressive symptoms, enhance life satisfaction, and improve overall well-being. Encouraging purposeful laughter is therefore a valuable strategy to promote happiness and quality of life among older adults.

Objectives

- To determine the prevalence of depression among elderly residents (≥60 years) in selected community areas and old age homes
- To evaluate the effectiveness of humour therapy in reducing the level of depression and quality of life among elderly participants by comparing pre- and post-intervention depression scores.
- To identify the association between selected demographic and clinical variables with the level of depression and QOL among elderly participants before and after humour therapy.
- To determine the level of satisfaction of humor therapy among the elderly in the experimental group.

Methodology

Study Design:

Descriptive research design was conducted to assess the prevalence of Depression among the elderly using Geriatric Depression Scale, True experimental research design was used to assess the effectiveness of Humour Therapy on depression, quality of life and attitude toward humour therapy. This design enabled comparison between an experimental group, which received the intervention and a control group without intervention.

Study Setting and Duration: The study was conducted in community people of urban and rural areas of Himmatnagar, Vadali and Poshina talukas and old age homes of Sabarkantha district. The data collection spanned over a period of five months.

Population and Sampling: Study population was the elderly with depression who are residing at selected old age homes and community areas of Sabarkantha district. Purposive sampling technique was used to select the settings and samples. True experimental design was adopted and selected settings were assigned to the experimental and control group through randomization.

Inclusion criteria

- Aged 60 years and above.
- Speak and understand Gujarati or English.
- who were willing to participate in the study.
- Depression score>11 as per the geriatric depression scale.

Exclusion criteria

- Elderly people with sensory deficits like complete blindness, total hearing loss, severe cognitive impairment and dementia were excluded.
- Very sick and unable to communicate.

A total of **200 participants** were selected and divided equally into two groups:

Experimental Group (n = 100): Received the Humour therapy

Control Group (n = 100): only under observation.

Ethical Considerations:

Ethical approval was obtained from the Medistar Hospital Ethics Committee, Himmatnagar, Gujarat (Approval No. P.NO/EC/04/2024, dated 30/04/2024). All participants were informed about the purpose of the study, the voluntary nature of their involvement, and their right to withdraw at any stage. Written informed consent was obtained prior to enrolment. Confidentiality and anonymity were ensured, and all procedures were conducted in accordance with the ethical principles outlined in the Declaration of Helsinki.

Intervention:

Humour therapy sessions were structured and delivered by the researcher in three interactive sessions per week, each lasting 45–60 minutes, over a period of three weeks. The content was adapted to suit participants' literacy levels and comprehension abilities.

The program consisted of four components:

1. **Spontaneous Humour** – naturally arising through conversations, jokes, or situational exchanges.
2. **Simulated Laughter** – guided exercises such as laughter yoga, clapping, and breathing techniques.
3. **Media-Based Humor** – exposure to humorous videos, films, and cartoons.
4. **Therapeutic Programs** – structured group interventions led by facilitators, including clown doctors, humor workshops, and storytelling.

Sessions were conducted in small groups of 10–12 elderly participants to ensure personal attention, active discussion, and clarification of doubts.

Data Collection Tools

A standardized, structured, and validated tool was developed to gather data in alignment with the study objectives. The instrument consisted of four sections:

1. Demographic Data – Information on age, sex, education, religion, marital status, spouse's status (residing in the old age home), occupation, source of income, monthly income, number of children, family type, and duration of stay in the old age home.

2. Clinical Variables – Details regarding medical illness, history of medications for major illnesses, hospitalization within the last five years, treatment-seeking behaviour, history of smoking or alcohol use, and prior training or information on relaxation techniques.

3. Geriatric Depression Scale (GDS) – The study employed Yesavage's standardized 30-item Geriatric Depression Scale, consisting of dichotomous ("Yes/No") questions to assess depressive symptoms among the elderly. Each depressive response was scored as one point. Specifically, items 1, 5, 7, 9, 15, 19, 21, 27, 29, and 30 were scored one for a "No" response, while all other items were scored one for a "Yes" response. The total score ranged from 0 to 30, with higher scores reflecting greater severity of depression. Interpretation of scores was as follows: 0–10 = Normal, 11–17 = Mild depression, and >17 = Severe depression. A standardized and structured, validated tool was developed to collect data related to the study objectives. The instrument consisted of four sections:

The WHO Quality of Life Scale

The WHOQOL-BREF, a 26-item short version of the WHOQOL-100, follows the same scoring procedure as the original, with some modifications: facet scores are not provided, mean substitution is permitted for Domains 1 (Physical Health) and 4 (Environment) if one item is missing, and only three items require reverse scoring. The tool generates four domain scores—Physical Health, Psychological, Social Relationships, and Environment—along with two additional items assessing overall quality of life and general health. Higher scores indicate better quality of life.

Rating Scale to Assess Satisfaction with Humor Therapy

To measure satisfaction with humor therapy, the researcher developed a 20-item scale aligned with the study objectives. Items assessed clarity of explanations, researcher's approach, adequacy of time, comprehensibility, usefulness, participant involvement, and program arrangements. Responses were rated on a four-point scale: Highly Satisfied (3), Satisfied (2), Dissatisfied (1), and Highly Dissatisfied (0). The total score ranged from 0–60, which was converted into percentages and categorized as: Highly Satisfied (61–80%), Satisfied (41–60%), Dissatisfied (24–40%), and Highly Dissatisfied (<25%).

Tool Validation and Reliability

The tool was developed through a review of relevant literature and consultation with subject experts. Content validity was established by a panel of 10 professionals, including specialists in mental health nursing, psychiatry, and therapy. Feedback from six experts was incorporated to improve clarity, cultural appropriateness, and logical sequencing. The final version was approved by the research supervisor. Reliability, tested through the test–retest method using a structured attitude scale, yielded a score of 0.80, indicating high reliability.

Demographic Characteristics of Participants

In the **experimental group**, most elderly were aged 60–70 years (57% aged 60–65; 45% aged 65–70), with 63% male and 37% female. Nearly half had secondary education (48%), while 11% were illiterate. The majority were Hindu (78%), and living arrangements were equally split between the community and old age homes; 23% had stayed<1 year, while 37% had stayed>2 years. Over half were divorced (56%), and only 23% lived with a spouse. About 38% had no children, while 34% had more than two. Most lived in nuclear families (72%), with limited home ownership (33%). Financially, 52% had no income, while others depended on pensions (23%), savings (13%), or family support (12%).

In the **control group**, most participants were also aged 60–70 years, predominantly male (68%) and Hindu (73%). Education was similar, with nearly half having secondary education (48%). Half lived in the community and half in old age homes, with many staying>2 years (39%). Most were divorced (57%), few lived with a spouse (14%), and 39% had more than two children. The majority lived in nuclear families (81%), did not own homes (78%), and had no income (53%) or rely on pensions (24%).

Depression Scores

Pre- and post-intervention depression levels were assessed using the standardized Geriatric Depression Scale. At baseline, both groups had comparable depression scores.

Group	N	Pre-test Mean ± SD	Post-test Mean ± SD	Calculated t	Table t(df=99 ,p=0.05)	Result
Experimental	100	18.76 ± 2.89	10.9± 1.78	18.63	1.98	Significant
Control	100	18.10 ±4.38	17.05 ±2.17	1.28	1.98	Not Significant)

After humour therapy, the experimental group showed a significant reduction in depression ($t = 18.63 > 1.98$, $p < 0.05$), with 78% scoring in the normal range, 20% mild depression, and only 2% remaining in the severe category. In contrast, the control group showed no significant change: 69% remained in mild depression, 28% in severe depression, and only 3% in the normal range (calculated t<table t).Post-test comparison confirmed that humour therapy was highly effective in reducing depression among elderly participants.

Effectiveness of Humor Therapy on Quality of Life

Table 1: Comparison of Quality of Life Scores within Experimental and Control Groups

Domain	Group	Pre-test Mean ± SD	Post-test Mean ± SD	t value	p value
Physical Health	Experimental	42.35 ± 6.12	56.28 ± 5.84	9.42	<0.001***
	Control	43.10 ± 5.87	44.20 ± 6.02	1.08	0.287
Psychological	Experimental	38.42 ± 7.02	55.65 ± 6.18	10.56	<0.001***
	Control	39.18 ± 6.88	40.05 ± 7.04	1.12	0.266
Social Relationships	Experimental	40.05 ± 5.94	54.80 ± 5.71	9.76	<0.001***
	Control	41.12 ± 6.14	42.20 ± 6.25	1.05	0.302
Environmental Factors	Experimental	44.22 ± 6.35	57.12 ± 5.98	8.95	<0.001***
	Control	45.05 ± 6.48	46.15 ± 6.32	1.09	0.279
Overall QoL	Experimental	41.76 ± 6.36	55.96 ± 5.93	11.25	<0.001***
	Control	42.36 ± 6.10	43.40 ± 6.28	1.14	0.259

***p<0.001 – highly significant

At baseline, both experimental and control groups had comparable quality of life (QOL) scores across physical, psychological, social, and environmental domains, mostly within the low to moderate range.

Following the intervention, the experimental group showed significant improvement in overall QOL, particularly in the psychological and social relationship domains. Participants reported greater life satisfaction, improved mood, and enhanced interpersonal interactions. In contrast, the control group showed no significant change.

Statistical analysis confirmed that the pre- to post-test improvement in the experimental group was significant ($p < 0.001$), while the control group remained unchanged ($p > 0.05$). Between-group comparisons further demonstrated that humor therapy effectively enhanced overall QOL among the elderly. In the experimental group, 80% scored at a good level, 18% average, and 2% poor; in the control group, 70% remained poor, 27% average, and only 3% good.

The Level of Satisfaction Regarding Humor Therapy

Satisfaction with humor therapy was assessed in the experimental group using a structured 20-item rating scale (maximum score = 80). Scores were categorized as follows:

Table 2: Distribution of Elderly by Level of Satisfaction with Humor Therapy (n = 100)

Level of Satisfaction	Score Range	Frequency (f)	Percentage (%)
Highly satisfied	61–80	82	80%
Moderately satisfied	41–60	18	20%
Dissatisfaction	≤40	0	0%
Total	-	100	100%

The mean satisfaction score for the experimental group was **68.42 ± 5.86** (range: 55–78). Most participants (80%) reported high satisfaction, and 20% moderate satisfaction, with none reporting low satisfaction. These results indicate that humor therapy was perceived as a highly acceptable and beneficial intervention among the elderly.

Association between Demographic and Clinical Variables with Depression

Chi-square analysis was conducted to examine associations between demographic and clinical variables with depression and quality of life (QOL).

Demographic Variables and Depression:

Significant associations were found between depression levels and **age** ($\chi^2 = 6.83$, $p < 0.05$), **gender** ($\chi^2 = 7.3$, $p < 0.05$), **education level** ($\chi^2 = 6.80$, $p < 0.05$), and **marital status** ($\chi^2 = 8.88$, $p < 0.05$). No significant associations were observed for religion, place of residence, duration of stay, spouse living in the old age home, number of children, type of family, source of income, or monthly income.

Clinical Variables and Depression:

Depression was significantly associated with the presence of **any medical illness** ($\chi^2 = 6.83$, $p < 0.05$). No significant associations were observed for history of major illness medications, hospitalization within the

past five years, treatment-seeking behaviour, smoking/alcohol use, or prior relaxation training.

Demographic and Clinical Variables with QOL (Experimental Group):

In the experimental group, QOL scores were significantly associated with age ($p<0.01$), gender and marital status ($p<0.05$), and presence of any medical illness ($p<0.01$).

Summary:

This study evaluated the effectiveness of humour therapy in reducing depression, enhancing quality of life, and fostering a positive attitude toward humour among elderly individuals. A true-experimental, two-group pre-test and post-test design was adopted, involving 200 elderly participants from selected community areas and old age homes in Sabarkantha, Gujarat. Participants were purposively assigned to an experimental group (receiving humour therapy three sessions per week for three weeks) or a control group (no intervention).

The therapy, delivered by trained nurses, included light stretching and breathing exercises, ice-breaker activities, structured laughter exercises (e.g., laughter yoga, clapping), and sharing of jokes and personal funny stories. Standardized tools, including the Geriatric Depression Scale, Quality of Life Scale, and a validated humor attitude scale, were used to assess outcomes.

Results indicated significant improvements in the experimental group. Mean quality of life scores increased from 41.76 ± 6.36 to 55.96 ± 5.93 ($p < 0.0001$), while depression scores decreased from 18.76 ± 2.89 to 10.9 ± 1.78 ($p < 0.0001$). In contrast, the control group showed minimal change. Post-intervention, 59% of the experimental group achieved normal depression scores, and 51% attained good quality of life, compared to only 1% in the control group. Positive attitudes toward humor were also significantly higher in the experimental group (68.42 ± 5.86 vs. 29.87 ± 2.84; $p < 0.00001$).

Statistical analysis revealed significant associations between depression and demographic variables (age, gender, education, marital status) as well as clinical conditions. Humor therapy promoted laughter, social interaction, and optimism, helping to reduce loneliness, stress, and hopelessness. As a low-cost, non-pharmacological intervention, it proved to be safe, enjoyable, and effective in improving mental health and overall well-being among the elderly.

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