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EFFECTIVENESS OF NURSING INTERVENTION BASED ON ROY'S ADAPTATION MODEL ON QUALITY OF LIFE AMONG MILD DEPRESSIVE PATIENTS IN SELECTED PSYCHIATRY HOSPITALS AND CLINICS

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ABSTRACT
Depression is a commonly occurring psychological problem which affects the emotional well-being, functioning, interpersonal relationships and the quality of life. Clients having mild depressive disorders suffer from problems associated with their sleeping patterns, self-esteem, role performance, coping strategies and social interactions. This study attempts to evaluate the efficacy of the nursing intervention designed according to Roy's Adaptation Model among mild depressive clients admitted to some selected hospitals and clinics of Vidarbha region in Maharashtra state. The study is based on the use of quantitative quasi-experimental design with pre-test and post-test control groups. A total of 100 mild depressive clients were included in the study. There were 50 clients each in the experimental and control groups. Data was collected using a demographic questionnaire, depression screening questionnaire, quality of life questionnaire, Roy's Adaptation Model-based assessment tool and records of participation in nursing interventions. The subjects in experimental group received nursing intervention based on the modes of adaptation including physiological, self-concept, role function and interdependence modes whereas the control group subjects received routine care at their psychiatric facilities. The results revealed that quality of life scores increased from 54.48 ± 7.09 to 77.12 ± 7.91 for the experimental group while the improvement was from 55.44 ± 8.19 to 59.12 ± 8.43 for the control group.

KEYWORDS: Roy's Adaptation Model; Nursing Intervention; Quality of Life; Mild Depressive Clients; Psychiatric Nursing

1. INTRODUCTION

Depression is a prevalent psychological problem and a significant public health issue that impacts emotion, cognition, bodily function, social interactions, job functioning, academic functioning, and quality of life. It is one of the major causes of disability worldwide and creates a considerable burden on clients, families, communities, and health care systems (World Health Organization [WHO], 2022). Depression may be classified as mild, moderate, or severe. Even mild depression can disturb sleep, appetite, concentration, motivation, self-esteem, social interaction, and daily functioning. WHO (2023) states that depression can affect a person's mood, thoughts and actions and can make carrying out daily activities difficult.

The problem of depression is increasingly common nowadays, especially considering how this problem has developed since the start of the COVID-19 pandemic. In many cases during this time, depression and anxiety disorders were reported across several nations, thus causing the need for early psychosocial and mental health interventions (Santomauro et al., 2021). Similarly, the authors of the study conducted by the COVID-19 Mental Disorders Collaborators (2021) reported that due to the aforementioned factors, there was an increase in mental health problems during the pandemic. The findings indicate that the need to enhance mental health services and create supportive intervention for the clients who are depressed.

However, regardless of age and geographic location, problems associated with mental well-being can always be found. According to findings from The Global Burden of Disease study, mental disorders continue to be a significant source of disease burden. Therefore, it is crucial to adopt appropriate methods to prevent, detect early, treat and rehabilitate mental disorders around the world (GBD 2019 Mental Disorders Collaborators, 2022). The prevalence of depressive disorders has also been found to vary between countries and communities, so mental health care needs to be planned based on the local needs, resources and client characteristics (Arias-de la Torre et al., 2021). Global trend analyses also suggest that depression continues to be a public health issue that needs to be addressed on an ongoing basis in both clinical and community settings (Moreno-Agostino et al., 2021).

Depression affects different aspects such as physical, psychological, social, and environmental. Consequently, quality of life emerges as an important criterion that must be assessed among patients suffering from mild depression. These patients may feel fatigued, lack motivation to participate in any activity, possess low self-esteem, show reduced occupational

performance, and have less social interaction. Depression interventions must aim not only at symptom management but also at improving coping abilities, adaptation, role behavior, and quality of life. While psychotropic, psychosocial and supportive therapies should be offered in addition to standard care, they are recommended for those with less severe depression (National Institute for Health and Care Excellence [NICE] 2022).

Screening is important to detect clients who have mild depression symptoms, and to identify clients who should be appropriate for intervention studies. Patient Health Questionnaire-9 (PHQ-9) is a commonly used scale to measure depressive symptoms and severity in clinical and research settings (Levis et al., 2020). The Patient Health Questionnaire-9 has also been supported in psychiatric settings for screening and assessment purposes with clients suffering from depressive disorders (Sun et al., 2020). Nurses and other health care providers can intervene early to support individuals with depression, while it is still in the early stages.

According to Çam and Büyükbayram (2020), nurse's role in the field of mental health and mental illness prevention is to provide client centred care, safe and effective communication, emotional support, psychosocial care and education. Structured supportive care is particularly crucial for mild depressive clients as this can help to decrease distress, enhance coping, and promote greater access to help (Marques et al., 2020).

The Adaptation Model developed by Roy provides a sound theoretical base for the current research. The individual is perceived as a system reacting to the environment through adaptations to stimuli that come from inside as well as outside the body. These include physiological mode, self-concept mode, role-function mode and interdependence mode. Such modes are very pertinent to mild depressive patients as they can suffer from sleep disturbances, low self-esteem, may find themselves unable to perform roles, and may have interpersonal relationship issues. Theories in nursing are used to plan nursing care that is structured, holistic and client centred, with the aim of meeting the needs of the client (Alligood, 2021). The adaptability model developed by Roy also has been studied and is continuing to be relevant to nursing practice and nursing research (Hurtado-Arenas & Guevara, 2020).

Mental health settings require practical, low cost, structured nursing care at an increasing level. Patel et al. (2023) noted the urgency to improve mental health systems and to merge mental health and psychosocial care into the mainstream of health services. Thus, the current research was conducted to ascertain the effectiveness of the nursing intervention through application of Roy's Adaptation Theory among patients suffering from mild depression within some Hospitals and Clinics of the region known as Vidarbha, which is in Maharashtra. The results of this study will help formulate the structured approach of Psychiatric Nursing for improving the quality of life, adaptation, and coping of patients with mild depression.

2. METHODOLOGY

2.1 Research Approach

For this study, a quantitative research design was employed. Given that the study's goal was to ascertain how well nursing interventions utilising Roy's Adaptation Model improved depressed clients' quality of life, it was assumed that quantitative methodology would be appropriate in this situation. Questionnaires and rating scales with numerical data were used to collect the data. To determine whether the intervention was improving the clients' quality of life of adaption, the pre-test and post-test results were statistically evaluated.

2.2 Research Design

A quasi-experiment with a pre-test and post-test on the control group was the research methodology used for the study. The experiment's participants were split into two groups: the experimental group and the control group. While the control group received standard psychiatric treatment, the experimental group received nursing interventions based on Roy's adaption model. There were pre-tests and post-tests for both the experimental and control groups.

2.3 Research Setting

The study was carried out in the selected hospitals and clinics of Vidarbha region in Maharashtra where psychiatric consultation, psychiatric counselling, treatment and follow-up care services were available for mild depressive clients. The research environment was chosen for the following reasons: availability of mild depressive clients, feasibility of data collection, permission from hospital and clinic authorities and cooperation of the health care team. The data was collected in an environment of calmness with confidentiality and comfort of the participants, and with their cooperation.

2.4 Population and Sample

The population for the research was people who had been diagnosed with mild depression. The available population was made up of patients with mild depression who visited selected hospitals and clinics within the Vidarbha region of Maharashtra at the time when the research was conducted. There were 100 patients with mild depression out of which 50 were allocated to the experimental group while 50 others were placed in the control group.

2.5 Sampling Technique and Sample Selection Criteria

Participants were selected by using a purposive sampling technique. The reason for this technique is that the researcher chose participants with mild depression as the researcher was only interested in their responses to the questionnaire and they were available for the researcher's visit and were willing to participate.

Mild depressive clients attending selected hospital and clinic of Vidarbha region, Maharashtra with capacity to understand the questions and willing to give informed consent were included.

Exclusion criteria were moderate or severe depression, severe psychiatric illness, cognitive impairment, medical instability, previous involvement in a similar intervention programme and unwillingness to participate in the study.

2.6 Variables of the Study

The nursing intervention utilising Roy's Adaptation Model served as the experiment's independent variable. Roy's Adaptation Model's four modes of adaptation—physiological, self-concept, role function, and interdependence were the focus of the nursing intervention, with quality of life for mild depressives serving as the dependent variable. Age, sex, education level, occupation, marital status, family type, housing, monthly family income, duration of depression, prior psychiatric admission, history of depression treatment, and family history of depression were among the demographic characteristics.

2.7 Tools for Data Collection

The survey instrument had several parts. The demographic questionnaire in Part A helped get personal and clinical information about the subjects. The depression screening test in Part B helped screen the subjects to be mild depression cases. There is a quality-of-life assessment in the physical, psychological, social, and environmental aspects of the subject's quality of life are covered in Part C. In Part D, the adaptation modes—physiology, self-concept, role function, and interdependence were evaluated using Roy's Adaptation Model. Lastly, Part E contained the treatment group's attendance list.

2.8 Validity and Reliability of the Tool

Based on input from specialists in psychiatric nursing, psychiatry, psychology, mental health nursing, and research methods, the validity of the instrument was assessed. The tool was rated based on its clarity, relevance, appropriateness and content adequacy. The feedback was considered before finalizing the tool.

The Cronbach's alpha approach was used to test the research tool's reliability. The reliability of the depression screening test was found to be moderate (Cronbach's alpha of 0.67). The quality-of-life test's reliability was shown to be adequate (Cronbach's alpha of 0.79). Additionally, it was discovered that the adaption model assessment tool had sufficient reliability (Cronbach's alpha of 0.85). After validity and reliability tests, the tool was deemed suitable for use in research.

2.9 Nursing Intervention Based on Roy's Adaptation Model

The framework of Roy's adaption model was followed in the development of the suggested nursing intervention strategy. This nursing approach was shown to contain four different types of adaptive modes: physiological mode, self-concept mode, role function mode, and interdependence mode.

In relation to the physiological mode, the following aspects were identified as key: sleep hygiene, rest, nutrition, relaxation exercises, exercise, and adherence to a daily schedule. Concerning the self-concept mode, the following strategies were employed: expression of emotions, self-esteem, confidence, positive thinking, and self-acceptance. In connection with the role-function mode, the following strategies were used: chosen daily responsibility, family role, occupational role, problem-solving, and activities.

Finally, about the interdependence mode, the strategies of communication, family relationships, social relations, relationship building, and getting help from other people during emotional distress were identified as key.

2.10 Data Collection Procedure and Data Analysis

Prior to the study, institutional ethics approval was obtained. Permission to gather data was obtained from the chosen clinics and hospitals in the Vidarbha region of Maharashtra. The researcher created inclusion and exclusion criteria to find suitable individuals. Before any data was collected, participants provided written informed consent.

Depression test results and preliminary demographic data were collected. Both the experimental group and the control group underwent pre-intervention evaluation utilising a quality-of-life questionnaire and an assessment tool created in accordance with Roy's Adaptation Model. Following the pre-intervention evaluation, participants in the experimental group received a nursing intervention based on Roy's Adaptation Model, while those in the control group received standard psychiatric nursing care. The same tool was used for both groups' post-intervention evaluations.

Coding, tabulation, and statistical analysis were used to examine the data. The proper statistical tests were used to perform descriptive and inferential analysis. To illustrate demographic traits, frequency and percentage were computed. The quality-of-life and adaptability scores were measured using the mean and standard deviation. The experimental group's pre-intervention and post-intervention scores were compared using the paired t-test. The two groups' post-intervention scores were compared using an unpaired t-test. To find out if there is a connection between quality-of-life scores and demographic traits, the chi-square test was used. The significance level was set at 0.05.

2.11 Ethical Considerations

Ethical approval was gained prior to carrying out the research from the ethics committee of the institution. Approval was sought and acquired from the chosen hospitals and clinics from the Vidarbha region of Maharashtra. Informed consent from all the respondents was sought after the purpose and procedure, advantages, and voluntary nature of participation were explained to them.

Confidentiality and anonymity were guaranteed during the research process. The respondents were assured that they have the liberty to quit the study at any point without any repercussions. No physical or psychological harm was caused to the participants. If any client's depressive symptoms worsened during the study period, the client was referred to a psychiatrist or concerned mental health professional for further management.

3. RESULTS

Results were presented based on the nature of the research and its methodological principles. In this regard, the study was conducted among 100 cases of clients suffering from mild depression; 50 of them comprised the experimental group, while the other 50 cases formed the control group. The methods employed for data gathering involved the use of demographic survey, depression test, quality-of-life survey, Roy's Adaptation Model survey, and an intervention attendance survey.

3.1 Demographic Characteristics of Participants

The demographic characteristics of the participants were analysed using frequency and percentage. According to the findings, the highest percentage of participants, 35%, belonged to the age group of 26–35 years. About gender, females slightly outnumbered males, with 51% females and 49% males. Most of the participants had secondary education, were employed, married, living in nuclear families, and residing in urban areas.

In terms of clinical features, most clients were taking medication and had been diagnosed with depression for six months to a year. Most individuals had never been hospitalised for mental illness and had no family history of depression. The study participants were better described by these clinical and demographic traits. Table 1 shows the demographics of clients with mild depression.

Table 1. Demographic Characteristics of Participants

Demographic Variable	Most Frequent Category	Frequency
Age	26–35 years	35
Gender	Female	51
Educational Status	Secondary education	37
Occupation	Employed	36
Marital Status	Married	72
Type of Family	Nuclear family	60
Place of Residence	Urban	51
Duration of Depression	6 months–1 year	39
Treatment History	On medication	36
Family History of Depression	No	69
Previous Psychiatric Hospitalization	No	79

According to the demographic results, the participants were primarily young to middle-aged clients who were already in contact with psychiatric care services and were socially stable. This background supported the feasibility of administering a structured nursing intervention among mild depressive clients.

3.2 Depression Screening Scores of Participants

Depression screening was employed to make sure that the subjects in the study suffered from mild cases of depression. In the depression screening questions, there were items about feeling sad, loss of interest, sleeping problems, tiredness, changes in appetite, poor self-image, inability to focus, agitation, and hopelessness.

The mean depression score was 7.28 ± 1.37 for the experimental group and 7.06 ± 1.33 for the control group. Both scores were within the mild depression range. This indicated that both groups were almost similar at baseline with respect to depression severity. The depression screening scores of participants in the experimental and control groups are shown in Table 2.

Table 2. Depression Screening Scores of Participants

Group	Mean Depression Score	Standard Deviation
Experimental Group	7.28	1.37
Control Group	7.06	1.33

Based on the findings, the depression levels of both groups were relatively equal at the beginning. Thus, it was feasible to compare the two groups to test the efficacy of the nursing intervention using the Roy’s Adaptation Model framework.

3.3 Pre-Test Quality-of-Life Scores

The pre-test was used to assess the quality of life before the intervention was put into practice. The client's level in terms of physical, psychological, social, and environmental aspects was assessed using the quality-of-life exam. The experimental group's pre-test mean quality-of-life score was 54.48 ± 7.09, while the control groups was 55.44 ± 8.19.

Prior to the intervention, both groups' quality of life was determined to be moderate. Table 3 displays the pre-test quality-of-life scores for the experimental and control groups.

Table 3. Pre-Test Quality-of-Life Scores

Group	Pre-Test Mean	Standard Deviation	Level of Quality of Life
Experimental Group	54.48	7.09	Moderate
Control Group	55.44	8.19	Moderate

The findings indicate that both groups had almost similar quality-of-life status before the intervention. This similarity in baseline scores strengthened the comparison of post-test outcomes after the nursing intervention.

3.4 Post-Test Quality-of-Life Scores

The post-test quality-of-life scores were documented at the conclusion of the intervention. While the control group received standard psychiatric care, the experimental group received nurse intervention utilising Roy's Adaptation Model. The experimental group's post-test means quality-of-life score increased to 77.12 ± 7.91, indicating a satisfactory quality of life. On the other hand, the control group showed little improvement, as evidenced by their modest quality-of-life post-test mean score of 59.12 ± 8.43. Table 4 displays the post-test quality-of-life scores for both the experimental and control groups.

Table 4. Post-Test Quality-of-Life Scores

Group	Post-Test Mean	Standard Deviation	Level of Quality of Life
Experimental Group	77.12	7.91	Good
Control Group	59.12	8.43	Moderate

The result of this finding revealed that the experimental group had a significant improvement in quality of life post structured nursing intervention. The effect of routine care was not as significant as the effect of the structured nursing intervention, with only minor improvement for the control group.

3.5 Comparison of Pre-Test and Post-Test Quality-of-Life Scores

The quality-of-life pre-test and post-test ratings for each group were analysed to determine the effectiveness of the nursing intervention used in the experimental and control groups. The paired t-test was used to analyse the variations in the scores between the two time points.

The experimental group's qualities of life scores showed a mean difference of 22.64, with the pre-test mean score being 54.48 ± 7.09 and the post-test mean score being 77.12 ± 7.91. The p value was less than 0.001, indicating significance, and the computed t value was 52.28.

The control group's pre-test score was 55.44 ± 8.19 and the post-test score was 59.12 ± 8.43, with a mean difference of 3.68. The control group's growth was not as significant as the experimental group's, even though the outcome was statistically significant. The differences between the experimental and control groups' pre and post quality of life scores are shown in Figure 1.

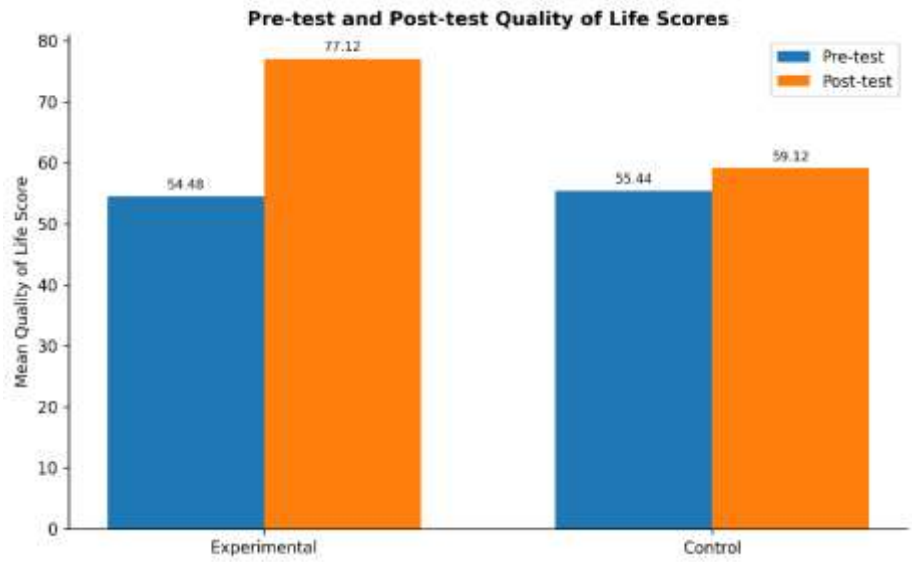

Figure 1. Pre-test and post-test quality-of-life scores among experimental and control groups

The comparison of pre-test and post-test quality-of-life scores among the experimental and control groups is presented in Table 5.

Table 5. Comparison of Pre-Test and Post-Test Quality-of-Life Scores

Group	Pre-Test Mean ± SD	Post-Test Mean ± SD	Mean Difference	t-value	p-value	Result
Experimental Group	54.48 ± 7.09	77.12 ± 7.91	22.64	52.28	<0.001	Highly significant
Control Group	55.44 ± 8.19	59.12 ± 8.43	3.68	13.93	<0.001	Significant

The results show that the nursing intervention based on Roy's Adaptation Model was effective in improving the quality of life among mild depressive clients. The higher mean difference in the experimental group indicates that the intervention had a stronger effect than routine care.

3.6 Comparison of Post-Test Quality-of-Life Scores Between Groups

The experimental and control groups' post-test quality of life scores were assessed using the unpaired t-test. This study done to see if participants who received nurse interventions using Roy's Adaptation Model had higher quality-of-life scores than those who received standard psychiatric therapy.

The post-test mean score for the experimental group was 77.12 ± 7.91, whereas it was 59.12 ± 8.43 for the control group. A p-value of less than 0.001 and a t-value of 11.01 were calculated, indicating a significant difference between the two. Table 6 shows the post-test quality of life scores for the experimental and control groups.

Table 6. Comparison of Post-Test Quality-of-Life Scores Between Groups

Group	Post-Test Mean	Standard Deviation
Experimental Group	77.12	7.91
Control Group	59.12	8.43

The findings demonstrate that, following the intervention, the experimental group outperformed the control group in terms of quality of life. This indicates that slightly depressed patients' quality of life was improved by the nursing intervention based on Roy's approach.

3.7 Domain-Wise Quality-of-Life Scores

Quality of life questionnaires comprised of four main categories which were physical, psychological, social, and environmental categories. The domains' analysis was conducted to determine the area in which the intervention had improved among participants in the experimental group.

The highest improvement was observed under the physical domain as the mean score rose from 13.24 to 19.62 with a mean difference of 6.38. The psychological domain increased from 13.88 to 19.56, with a mean difference of 5.68. The social domain increased from 13.94 to 19.04, with a mean difference of 5.10. The environmental domain increased from 13.42 to 18.90, with a mean difference of 5.48. All domains showed statistically significant improvement. The domain-wise quality-of-life scores in the experimental group are presented in Table 7.

Table 7. Domain-Wise Quality-of-Life Scores in Experimental Group

Quality-of-Life Domain	Pre-Test Mean	Post-Test Mean	Mean Difference	t-value	p-value	Result
Physical Domain	13.24	19.62	6.38	13.18	<0.001	Significant
Psychological Domain	13.88	19.56	5.68	11.41	<0.001	Significant
Social Domain	13.94	19.04	5.10	10.27	<0.001	Significant
Environmental Domain	13.42	18.90	5.48	9.94	<0.001	Significant

The results indicate that the intervention improved all domains of quality of life. The improvement in the physical domain may be due to sleep hygiene, relaxation exercises, activity scheduling, and maintenance of a healthy daily routine. The domain-wise comparison of pre-test and post-test quality-of-life scores in the experimental group is shown in Figure 2.

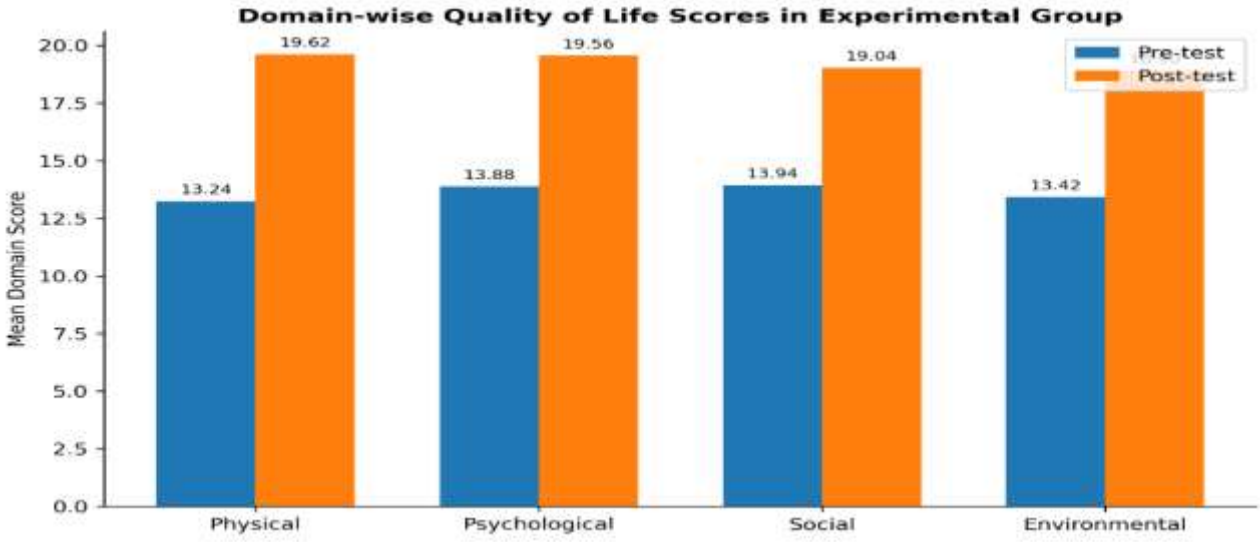

Figure 2. Domain-wise pre-test and post-test quality-of-life scores in the experimental group

The improvement in the psychological domain may be due to positive thinking, emotional expression, confidence building, and reduction of negative thoughts. The improvement in the social and environmental domains may be related to communication, social support, family involvement, and better coping strategies.

3.8 Roy's Adaptation Model-Based Assessment Scores

Roy's adaption Model was used to evaluate the adaption of patients with mild depression. Four forms of adaptation—physiological, self-concept, role-functioning, and interdependence were assessed.

The average adaption score for the experimental group was 45.64 ± 6.45 prior to the test and increased to 66.72 ± 6.80 following the intervention. The difference of 21.08 indicates a significant advancement in adaption. Figure 3 shows the experimental and control groups' pre-test and post-test adaption scores based on Roy's adaption Model.

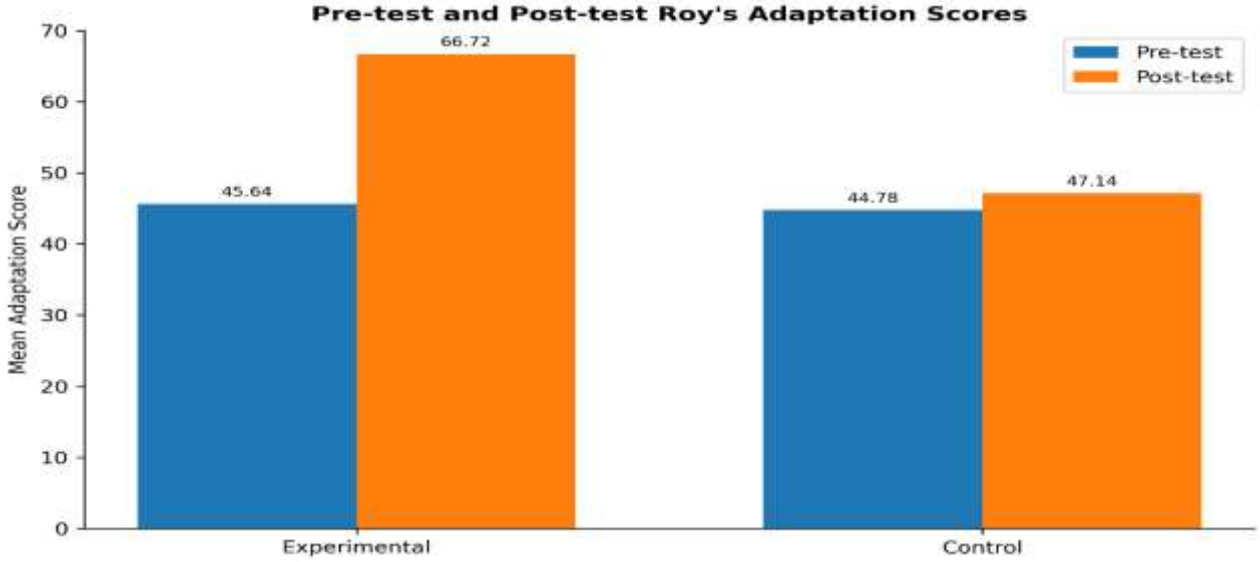

Figure 3. Pre-test and post-test Roy's Adaptation Model-based assessment scores among experimental and control groups

In the control group, the pre-test mean score was 44.78 ± 6.01, which increased slightly to 47.14 ± 6.28 in the post-test. The mean difference was 2.36, showing slight improvement. The Roy's Adaptation Model-based assessment scores among the experimental and control groups are shown in Table 8.

Table 8. Roy's Adaptation Model-Based Assessment Scores

Group	Pre-Test Mean ± SD	Post-Test Mean ± SD	Mean Difference	Interpretation
Experimental Group	45.64 ± 6.45	66.72 ± 6.80	21.08	Marked improvement
Control Group	44.78 ± 6.01	47.14 ± 6.28	2.36	Slight improvement

Based on the results, the experiment group adapted well because of the intervention. These results could have been influenced by the intervention exercises conducted with regards to sleep, relaxation, expressing emotions, optimism, role orientation, communication, and family support.

3.9 Association Between Quality of Life and Selected Demographic Variables

The chi-square test was used to link quality of life following the post-test with a few demographic factors. Age, sex, education level, marital status, duration of depression, treatment, and history of depression were among the demographic factors.

Since all the p-values were more than 0.05, the results showed that none of the chosen demographic characteristics had a statistically significant relationship with the post-test quality of life. Table 9 displays the relationship between certain demographic characteristics and post-test quality of life.

Table 9. Association Between Quality of Life and Selected Demographic Variables

Demographic Variable	Chi-Square Value	p-value
Age	6.19	0.402
Gender	1.66	0.436
Educational Status	4.72	0.580
Marital Status	9.33	0.156
Duration of Depression	5.15	0.524
Treatment History	5.34	0.501
Family History of Depression	0.15	0.926

These results show that there was no significant relationship between the enhancement of QOL and any of the chosen demographics. This means that the observed QOL improvement in the experiment can be mainly credited to the nursing intervention conducted using Roy's Adaptation Theory.

3.10 Reliability of the Research Tool

Cronbach's alpha test was used to check the reliability of the research tool. The internal consistency of the questionnaire items was examined using reliability analysis. Questionnaire items included in the research were categorized into depression screening questions, quality of life questions, and questionnaire items that tested using the Roy Adaptation model.

Questionnaire items that tested on depression screening had a moderate/questionable degree of reliability with the value of Cronbach's alpha of 0.67. Pre-test quality of life questions had poor reliability with the value of Cronbach's alpha of 0.40 whereas post-test quality of life had acceptable degree of reliability with the value of Cronbach's alpha of 0.79. In the same manner, pre-test questionnaire items which tested for Roy's adaptation model had poor degree of reliability with value of 0.29 while post-test questionnaire items which tested Roy's adaptation model had good reliability with value of 0.85.

Table 10. Reliability of the Research Tool

Section of Tool	Cronbach's Alpha Value	Level of Reliability	Interpretation
Depression Screening Items	0.67	Moderate reliability	The items showed moderate internal consistency and were reviewed before final use.
Quality of Life — Pre-test	0.40	Poor reliability	The items showed low internal consistency and required refinement.
Quality of Life — Post-test	0.79	Acceptable reliability	The items showed acceptable internal consistency.
Roy's Adaptation Model — Pre-test	0.29	Poor reliability	The items showed low internal consistency and required refinement.
Roy's Adaptation Model — Post-test	0.85	Good reliability	The items showed good internal consistency.

Reliability results show that the post-test sections were more internally consistent than the pre-test sections. Since the items in the depression scale were recalculated and checked for internal consistency, the results were moderate. Some

sections of the pre-test were not very reliable indicating the need for refinement and expert review. The post-test Quality-of-Life section and Roy's Adaptation Model based assessment section achieved acceptable to good reliability, though.

SUMMARY OF RESULTS

The results showed that the Roy Adaptation Model-based nursing intervention was effective in raising the mildly depressed clients' quality of life. The mean score related to the quality of life increased from 54.48 ± 7.09 before the intervention to 77.12 ± 7.91 after the intervention for the experimental group. The mean score for the control group increased from 55.44 ± 8.19 to 59.12 ± 8.43.

A statistically significant difference in the results of the post-intervention phase between both groups was revealed through statistical analysis, thereby confirming the effectiveness of the intervention. The domain-specific scores indicated that the intervention resulted in a positive change in all the four domains. The experimental group also showed improvement in Roy's Adaptation Model-related scores. The post-test quality of life scores did not significantly correlate with any demographic trait, according to the chi-square test.

4. DISCUSSION

The current study's goals were to evaluate how well nursing interventions utilising Roy's Adaptation Model improved the quality of life for patients with mild depression in hospitals and clinics in the Vidarbha region of Maharashtra State. According to the findings, the experimental group's quality of life significantly improved following the intervention, while the control group showed minimal change despite therapy. This suggests that mild depressive clients may benefit from a structured nursing intervention focused on adaptive coping, emotional support, role adjustment, and interpersonal support. A structured questionnaire comprising a demographic questionnaire, a depression screening questionnaire, a quality-of-life questionnaire, an assessment tool based on Roy's Adaptation Model, and an intervention attendance record was employed in this study. These instruments assisted in determining the clients' initial state, gauging their quality of life, assessing adaptability, and keeping track of their involvement in the intervention.

It was clear from the pre-test results that both the experimental and control patients had a moderate quality of life before to the start of the treatment. Clients with mild depression may therefore experience issues in the social, psychological, environmental, and physical realms. Sleep, energy, hunger, focus, self-esteem, relationships, and day-to-day functioning can all be impacted by depression. Additionally, the World Health Organisation has emphasised the need for supporting mental health interventions and the tight relationship between mental health issues and functioning and well-being (World Health Organisation, 2022).

In comparison to the control group, the experimental group's quality of life scores increased considerably following the intervention. The implementation of a systematic nursing intervention that made use of Roy's Adaptation Model's four adaptable modes—physiological, self-concept, role-function, and interdependence modes may be responsible for this shift. According to Roy's Adaptation Model, a human being is described as an adaptive system whose operation is modified in response to external or internal stimuli (Hurtado-Arenas & Guevara, 2020).

Improvement in the physiological domain may be related to the components of the intervention such as sleep hygiene, relaxation, nutrition, activity scheduling, and maintenance of a daily routine. These activities may have helped to reduce fatigue, improve sleep quality, and enhance the ability of clients to perform activities of daily living. Supportive measures in depression care often include lifestyle-related approaches such as sleep regulation, physical activity, nutrition, and routine maintenance (Sarris et al., 2020).

The experimental group also showed significant improvement in the psychological domain. This improvement may be due to activities such as emotional expression, positive thinking, self-esteem building, self-acceptance, and identification of personal strengths. These activities are similar to cognitive and behavioural strategies used in depression management. Cognitive behaviour therapy has been found to be effective and acceptable for adults with depression in different modes of delivery (Cuijpers et al., 2020).

The nursing intervention also helped clients become aware of negative thoughts and replace them with more adaptive thoughts. This may have contributed to better emotional regulation, improved self-confidence, and enhanced mental well-being among participants. Structured psychological strategies are important in depression care, and internet-based cognitive behavioural therapy has also been reported to reduce depressive symptoms effectively (Karyotaki et al., 2021).

Improvement in the role-function mode may be associated with guidance related to daily responsibilities, family roles, occupational roles, problem-solving, and activity planning. Mild depressive clients may experience reduced motivation and difficulty in performing daily activities. Behavioural activation therapy focuses on participation in meaningful and rewarding activities and has been reported to be helpful for adults with depression (Uphoff et al., 2020).

The intervention supported participants in planning their activities and managing daily tasks according to their abilities. Role clarification and activity scheduling may help to improve confidence and reduce feelings of helplessness. Psychological interventions have also been shown to improve depressive symptoms and functioning among adults (Ren et al., 2021).

The interdependence mode showed improvement through activities related to communication skills, family support, social support, relationship building, and seeking help during emotional distress. Many clients with depression tend to withdraw from family and social relationships. The intervention encouraged participants to express their emotions and maintain healthier interpersonal relationships. Peer support interventions have also been reported to reduce depressive symptoms and improve emotional support (Huang et al., 2020).

These findings also showed that there was improvement in Roy's Adaptation Model based assessment scores in the experimental group. This means that the nursing intervention had a positive effect on the functional, social, emotional and

physical adaptation of the clients with mild depression. To manage stress and psychological adjustment, enhancing resilience and coping capacity is important (Southwick and Charney, 2021).

The post-test quality-of-life scores showed a statistically significant difference between the experimental and control groups. These findings indicate that routine care alone may not be sufficient to produce substantial improvement in quality of life among mild depressive clients. Guidelines for depression care recommend psychological and psychosocial interventions, particularly for clients with less severe depression (NICE, 2022).

The present findings are also supported by evidence that positive psychological interventions, including mindfulness-based and supportive psychological interventions, can improve mental health outcomes among adults. Such techniques may help individuals develop awareness, regulate emotions, accept experiences, and use healthier coping strategies during stressful situations (Galante et al., 2021).

The present intervention included emotional ventilation, positive thinking, relaxation, activity planning, and interpersonal support as supportive nursing strategies. Although it was not a formal cognitive behavioural therapy programme, its components were consistent with the basic principles of structured psychological care. Cognitive behaviour therapy is widely used for managing negative thinking and improving coping patterns in depression (Chand et al., 2023).

The utility of a quasi-experimental pre-test and post-test control group design in evaluating the efficacy of an intervention is supported by the comparison between experimental and control groups. When comparing an intervention group to a control group is necessary but random assignment is not practical, this design is frequently employed in health and implementation research (Miller et al., 2020).

There was no statistically significant correlation between quality of life and certain demographic factors, according to the study. This implies that improvements in quality of life were not significantly correlated with age, gender, education, marital status, length of depression, treatment history, or family history of depression. Therefore, the nursing intervention may be primarily responsible for the improvement seen in the experimental group. However, while designing psychological and supporting therapies, individual client aspects should still be considered (Wang et al., 2020).

Preventive and sequential psychological interventions are also important in reducing relapse and supporting long-term recovery in depression. The present study indicates that structured nursing care can help mild depressive clients achieve better emotional adaptation and quality of life (Breedvelt et al., 2021).

Overall, the findings showed that nursing intervention based on Roy's Adaptation Model was effective in improving quality of life and adaptation among mild depressive clients. The intervention focused on four major areas: physical health, emotional well-being, role performance, and interpersonal relationships. Therefore, psychiatric nurses can use Roy's Adaptation Model to plan holistic, client-centred, and adaptive nursing care for clients experiencing mild depression (Hurtado-Arenas & Guevara, 2020; World Health Organization, 2022; NICE, 2022).

CONCLUSION

According to the results of this study, nurse interventions using Roy's Adaptation Model can be regarded as an effective way to improve the quality of life for patients with mild depression in a few hospitals and clinics in Maharashtra's Vidarbha region. The findings demonstrate that the experimental group's quality-of-life scores improved more than those of the control group. Physical, psychological, social, and environmental aspects of quality of life have all shown improvements. Better coping and adaptive responses were found in mildly depressed individuals when they engaged in activities such role adjustment, communication, emotional expression, positive thinking, relaxation techniques, sleep hygiene instruction, activity planning, and family support. Additionally, the results indicated that certain demographic factors did not significantly correlate with post-test quality of life, indicating that the intervention was primarily responsible for the improvement. As a result, Roy's Adaptation Model is a useful foundation for practicing psychiatric nursing. It offers a comprehensive, client-centred strategy to enhance mildly depressed clients' quality of life, emotional flexibility, role functioning, and interpersonal connections.

REFERENCES

1. Alligood, M. R. (2021). *Nursing theorists and their work*. Elsevier.
2. Arias-de la Torre, J., Vilagut, G., Ronaldson, A., Serrano-Blanco, A., Martín, V., Peters, M., et al. (2021). Prevalence and variability of current depressive disorder in 27 European countries: A population-based study. *The Lancet Public Health, 6*(10), e729–e738.
3. COVID-19 Mental Disorders Collaborators. (2021). Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *The Lancet, 398*(10312), 1700–1712.
4. Çam, O., & Büyükbayram, A. (2020). Nurses' role in mental health promotion and prevention of mental illness. *Journal of Psychiatric Nursing, 11*(3), 240–247.
5. GBD 2019 Mental Disorders Collaborators. (2022). Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: A systematic analysis for the Global Burden of Disease Study 2019. *The Lancet Psychiatry, 9*(2), 137–150.
6. Hurtado-Arenas, P., & Guevara, M. R. (2020). A bibliometric analysis of research based on the Roy Adaptation Model: A contribution to nursing. *Revista Latino-Americana de Enfermagem, 28*, e3328.
7. Levis, B., Benedetti, A., Thombs, B. D., & DEPRESsion Screening Data Collaboration. (2020). Accuracy of Client Health Questionnaire-9 scores for screening to detect major depression: Individual participant data meta-analysis. *BMJ, 365*, l1476.
8. Marques, L., Bartuska, A. D., Cohen, J. N., & Youn, S. J. (2020). Three steps to flatten the mental health need curve amid the COVID-19 pandemic. *Depression and Anxiety, 37*(5), 405–406.

9. Moreno-Agostino, D., Wu, Y. T., Daskalopoulou, C., Hasan, M. T., Huisman, M., & Prina, M. (2021). Global trends in the prevalence and incidence of depression: A systematic review and meta-analysis. *Journal of Affective Disorders, 281*, 235–243.
10. National Institute for Health and Care Excellence. (2022). *Depression in adults: Treatment and management. NICE guideline NG222*. NICE.
11. Patel, V., Saxena, S., Lund, C., Thornicroft, G., Baingana, F., Bolton, P., et al. (2023). Transforming mental health systems globally: Principles and policy recommendations. *The Lancet, 402*(10402), 656–676.
12. Santomauro, D. F., Mantilla Herrera, A. M., Shadid, J., Zheng, P., Ashbaugh, C., Pigott, D. M., et al. (2021). Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *The Lancet, 398*(10312), 1700–1712.
13. Sun, Y., Fu, Z., Bo, Q., Mao, Z., Ma, X., & Wang, C. (2020). The reliability and validity of PHQ-9 in patients with major depressive disorder in psychiatric hospital. *BMC Psychiatry, 20*, 474.
14. World Health Organization. (2022). *World mental health report: Transforming mental health for all*. World Health Organization.
15. World Health Organization. (2023). *Depressive disorder (depression): Fact sheet*. World Health Organization.
16. Breedvelt, J. J. F., Warren, F. C., Segal, Z., Kuyken, W., & Bockting, C. L. H. (2021). Continuation of antidepressants vs sequential psychological interventions to prevent relapse in depression: An individual participant data meta-analysis. *JAMA Psychiatry, 78*(8), 868–875.
17. Chand, S. P., Kuckel, D. P., & Huecker, M. R. (2023). Cognitive behavior therapy. *StatPearls Publishing*.
18. Cuijpers, P., Noma, H., Karyotaki, E., Cipriani, A., & Furukawa, T. A. (2020). Effectiveness and acceptability of cognitive behavior therapy delivery formats in adults with depression: A network meta-analysis. *JAMA Psychiatry, 77*(7), 700–707.
19. Galante, J., Friedrich, C., Dawson, A. F., Modrego-Alarcón, M., Gebbing, P., Delgado-Suárez, I., et al. (2021). Mindfulness-based programmes for mental health promotion in adults in nonclinical settings: A systematic review and meta-analysis. *PLOS Medicine, 18*(1), e1003481.
20. Huang, R., Yan, C., Tian, Y., Lei, B., Yang, D., Liu, D., & Lei, J. (2020). Effectiveness of peer support intervention on perinatal depression: A systematic review and meta-analysis. *Journal of Affective Disorders, 276*, 788–796.
21. Hurtado-Arenas, P., & Guevara, M. R. (2020). A bibliometric analysis of research based on the Roy Adaptation Model: A contribution to nursing. *Revista Latino-Americana de Enfermagem, 28*, e3328.
22. Karyotaki, E., Efthimiou, O., Miguel, C., Bermpohl, F. M. G., Furukawa, T. A., Cuijpers, P., et al. (2021). Internet-based cognitive behavioral therapy for depression: A systematic review and individual patient data network meta-analysis. *JAMA Psychiatry, 78*(4), 361–371.
23. Miller, C. J., Smith, S. N., & Pugatch, M. (2020). Experimental and quasi-experimental designs in implementation research. *Psychiatry Research, 283*, 112452.
24. National Institute for Health and Care Excellence. (2022). *Depression in adults: Treatment and management. NICE guideline NG222*. NICE.
25. Ren, Z., Zhao, H., Zhang, X., Shi, H., & Wang, Y. (2021). Effectiveness of psychological interventions for depression among adults: An umbrella review. *Journal of Affective Disorders, 279*, 512–523.
26. Sarris, J., O'Neil, A., Coulson, C. E., Schweitzer, I., & Berk, M. (2020). Lifestyle medicine for depression. *BMC Psychiatry, 20*, 1–13.
27. Southwick, S. M., & Charney, D. S. (2021). *Resilience: The science of mastering life's greatest challenges*. Cambridge University Press.
28. Uphoff, E., Ekers, D., Robertson, L., Dawson, S., Sanger, E., South, E., et al. (2020). Behavioural activation therapy for depression in adults. *Cochrane Database of Systematic Reviews, 7*, CD013305.
29. Wang, S. B., Wang, Y. Y., Zhang, Q. E., Wu, S. L., Ng, C. H., Ungvari, G. S., et al. (2020). Cognitive behavioral therapy for post-stroke depression: A meta-analysis. *Journal of Affective Disorders, 265*, 589–596.
30. World Health Organization. (2022). *World mental health report: Transforming mental health for all*. World Health Organization.