
The research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In this, the various steps that are generally adopted by a researcher in studying his/her research problem along with the logic behind them are explained. The research methods can be put into the following three groups:

- ❖ In the first group, those methods are included which are concerned with the collection of data. These methods are used, when the data already available, are not sufficient to arrive at the required solution.
- ❖ The second group consists of those statistical techniques which are used for establishing relationships between the data and the unknowns.
- ❖ While in the third group, methods which are used to evaluate the accuracy of the results obtained are included.

Two general approaches to research are widely recognized: quantitative research and qualitative research. In this chapter, the research methods used in this particular study are discussed. It includes a description of the sample size and characteristics, the procedures for data collection and describes the instruments used as well as the data analysis procedures.

The study on ‘Efficacy of Carnatic Music Therapy and Pranayama in Managing Depression’ involves the following steps:

- Objectives
- Hypotheses
- Research Design
- Area

- Sample
- Tools
- Procedure
- Intervention
- Reassessment
- Analysis of data

OBJECTIVES

- To identify the level of depression in the sample.
- To find out the relationship between depression, resilience and self-esteem in people with mild level of depression.
- To identify the level of resilience in people with mild level of depression.
- To identify the level of self-esteem in people with mild level of depression.
- To identify the effectiveness of Carnatic music therapy in managing depression.
- To identify the effectiveness of Pranayama in managing depression.
- To identify the effectiveness of Carnatic music therapy and Pranayama (combined) in managing depression.
- To identify the effectiveness of Carnatic music therapy in enhancing resilience and self-esteem among people with mild level of depression.
- To identify the effectiveness of Pranayama in enhancing resilience and self-esteem among people with mild level of depression.
- To identify the effectiveness of Carnatic music therapy and Pranayama (combined) in enhancing resilience and self-esteem among people with mild level of depression.

HYPOTHESES

Based on the above mentioned objectives, the following hypotheses were made. The hypotheses are postulated as alternate hypotheses so that it can either be accepted or rejected based on the results from the statistical analysis.

1. There will be a significant relationship between depression, resilience and self-esteem in people with mild level of depression.
2. There will be a significant reduction in the level of depression after the intervention of Carnatic music therapy among people with mild level of depression.
3. There will be a significant improvement in the level of resilience after the intervention of Carnatic music therapy among people with mild level of depression.
4. There will be a significant improvement in the level of self-esteem after the intervention of Carnatic music therapy among people with mild level of depression.
5. There will be a significant reduction in the level of depression after the intervention of Pranayama among people with mild level of depression.
6. There will be a significant improvement in the level of resilience after the intervention of Pranayama among people with mild level of depression.
7. There will be a significant improvement in the level of self-esteem after the intervention of Pranayama among people with mild level of depression.
8. There will be significant reduction in the level of depression after the intervention of Carnatic music therapy and Pranayama (combined) among people with mild level of depression.
9. There will be significant improvement in the level of resilience after the intervention of Carnatic music therapy and Pranayama (combined) among people with mild level of depression.
10. There will be significant improvement in the level of self-esteem after the intervention of Carnatic music therapy and Pranayama (combined) among people with mild level of depression.
11. There will be significant difference in the level of depression between Before, After and Follow-up periods in the control group.

12. There will be significant difference in the level of resilience between Before, After and Follow-up periods in the control group.
13. There will be significant difference in the level of self-esteem between Before, After and Follow-up periods in the control group.

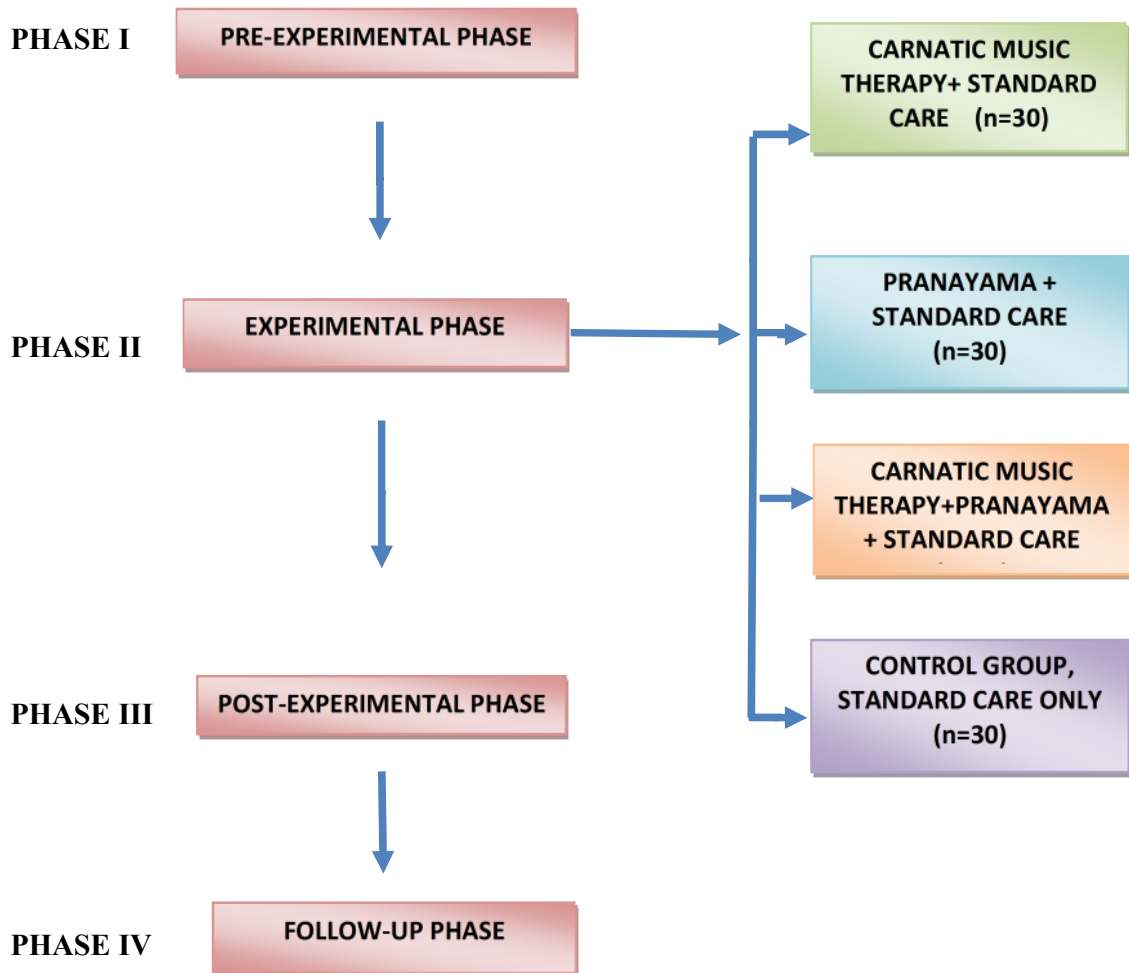
RESEARCH DESIGN

This study followed Pre-test, post-test, Follow-up with control group design. A total sample of 120 people with mild level of depression was selected for the study and was randomly assigned to four groups. Carnatic Music Therapy group, Pranayama group, Carnatic Music Therapy and Pranayama group and Control group are the four groups in the study. The four groups were assessed at three points of time, pre-test phase, post-test phase (immediately after the intervention) and follow-up phase (three months after the intervention was withdrawn).

RESEARCH DESIGN

PRETEST, POST TEST, FOLLOW-UP WITH CONTROL GROUP DESIGN

N=120



AREA

The present study was done in Innervision Counselling Centre, an outpatient clinic in Thrissur district, Kerala.

The reasons for selecting this area were as follows:

- Accessibility for the research.
- Permission and facilities provided by the authorities to carry out the research.
- The availability of the required sample for the study.
- The willingness and cooperation of the participants to serve as subjects in the study.

SAMPLE

The sample for the study consisted of 120 adults with mild level of unipolar depression ranging from 18 to 45 years of age. At first, the clinicians at the Centre identified the potential participants (N=162) among their clients for the researcher. Then these clients were evaluated by the investigator based on the inclusion and exclusion criteria. Out of them, 120 subjects with mild level of unipolar depression were selected by purposive sampling method to serve as the sample for the study.

The following are the inclusion and exclusion criteria:

INCLUSION CRITERIA:

- Primary diagnosis with mild level of unipolar depression.
- Age ranges between 18 to 45 years are included in the study.

EXCLUSION CRITERIA:

- Moderate and severe depressions were excluded.
- Ages below 18 years and above 45 years were excluded.
- Clients with a history of substance abuse or any other psychiatric disorder were excluded.
- Clients with any major physical illnesses were excluded.

TOOLS

Personal data sheet

Personal data sheet constructed by the investigator was used to collect the relevant demographic variables such as gender, age, marital status, occupational status and socioeconomic status of the sample.

Beck's Depression Inventory (Beck, 1961)

The Beck's Depression Inventory by Beck et al. (1961) (Revised, 1971) was used to assess the level of depression among the sample. The inventory consists of 21 items presented in a multiple-choice format, with four options namely, 'Always', 'Often', 'Sometimes' and 'Never'. The subject was asked to choose any one of the four options which applies to them the most at that particular time. This test measures presence and degree of depression in adolescents and adults consistent with the DSM-IV. It is not intended as a diagnostic instrument but is used mostly as a screening instrument and for clinical research. Each of the 21-items of the BDI attempts to assess a specific symptom or attitude which appear(s) to be specific to depressed patients and which are consistent with descriptions of the depression contained in the psychiatric literature. The BDI thus evaluates 21 symptoms of depression, 15 of which cover emotions, four cover behavioral changes and six somatic symptoms. The 21 items cover sadness, pessimism, past failure, self-dislike, self-criticism, suicidal thoughts or wishes, crying, agitation, loss of interest, indecisiveness, worthlessness, loss of energy, changes in sleeping patterns, irritability, changes in appetite, difficulty concentrating, tiredness or fatigue and loss of interest in sex. The BDI takes approximately 10 minutes to complete. Content validity seems to be quite high since the BDI appears to evaluate a wide variety of symptoms and attitudes associated with depression. Beck reports studies in which coefficients of 0.65 and 0.67 were obtained and demonstrated a correlation coefficient of .86 for the test items and the Spearman-Brown correlation for the reliability of the BDI yielded a coefficient of 0.93.

Bharathiar University Resilience Scale (BURS) (Form A). (Annalakshmi, 2009)

Bharathiar University Resilience Scale (BURS) (Form A). The BURS (Form A) (Annalakshmi, 2009) consists of 30 Likert type items. The scale is used to measure seven domains of resilience including duration for getting back to normalcy, reaction to negative events, response to risk factors (specifically disadvantaged environment) in life,

perception of effect of past negative events, defining problems, hope/confidence in coping with future and openness to experience and flexibility. All the thirty items in the scale are in the form of personal statements, for example, "I can recover from bad mood quickly and easily after facing any sad event", "I don't venture on any project where I had failed earlier", etc. The participant is asked to indicate the extent to which each statement is appropriate in describing him/her by using a five-point scale, with response option "1" indicating that the statement is not at all appropriate in describing him/her and option "5" indicating that the statement is most appropriate in describing him/her. The responses of the participant for all the thirty statements in the scale are summed up to yield a single score on the scale representing the level of psychological resilience of the individual. The maximum score possible of a subject on the scale is 150 and the minimum score possible on the scale is 30. The scale has adequate reliability. The Cronbach Alpha for the scale was found to be 0.82. The scale has adequate concurrent validity. The scale had significant positive correlation with Friborg Resilience Scale, 0.349 and with Bell Adjustment Scale 0.382

Rosenberg's Self-Esteem Scale (RSES) (Rosenberg, 1965)

Rosenberg's Self-Esteem Scale (RSES) by Rosenberg (1965) was used to evaluate the level of self-esteem among the subjects. It consists of 10 statements related to overall feelings of self-worth or self-acceptance. The items are answered on a four-point scale ranging from 'Strongly Agree' to 'Strongly Disagree'. The scale has high reliability: test-retest reliability are in the range of .82 to .88 and Cronbach's alpha for various samples are in the range of .77 to .88. Criterion validity of the scale was 0.55 and Construct validity established is correlated with anxiety (- 0.64), depression (- 0.54), and anomie (-0.43).

Carnatic Music Therapy CD (CMT)(Priyadarsini, 2014)

In addition to the above scales, the researcher also used a Recorded Flute Music CD. This CD developed by the researcher was based on five Carnatic music ragas namely Atana, Kanada, Mohanam, Revagupti and Neelambari for intervention. The total duration of the CD was 30 minutes with each raga rendered 5 minutes long. The instrumental music was specifically chosen in order to avoid semantic interference of lyrics into the participant's mood and thoughts.

Table 1 : RAGAS AND ITS EFFECTIVENESS

RAGA	STRUCTURE OF RAGA (ARRANGEMENT OF SWARAS) AAROHANA AND AVAROHANA (ascending and descending scale)	EMOTIONS AND EFFECTS OF RAGAS
ATANA	AA: SA RI MA PA NI SA AV: SA NI DHA PA MA PA GA RI SA	Evokes bravery and valor (veera rasa). Gives enthusiasm and confidence. Effective for depression and anger management.
KANADA	AA: SA RI GA MA DHA NI SA AV: SA NI PA MA GA MA RI SA	Evokes happy as well as a tint of sad emotions. Also evokes love, compassion, contentment and peace. Effective in the relief from tension, balancing the mind.
MOHANAM	AA: SA RI GA PA DHA SA AV: SA DHA PA GA RI SA	Evokes devotion (Bhakti), love and compassion. Capable of giving immediate happiness. Effective in depression, anxiety and anger management.
REVAGUPTI	AA: SA RI GA PA DHA SA AV: SA DHA PA GA RI SA	It's a morning raga that evokes happiness and feelings of freshness, hope and optimism. Capable of energizing and balancing the mind-body system.
NEELAMBARI	AA: SA RI GA MA PA DHA PA NI SA AV: SA NI PA MA GA RI GA SA	Evokes a feeling of safety, security and peace. Capable of inducing deep relaxation and sleep. Effective for insomnia.

PROCEDURE

The present study was conducted between October 2013 and September 2015. It was conducted in Innervision Counselling Centre, an outpatient clinic in Thrissur district, Kerala. The Director of the outpatient clinic was approached by the investigator to seek permission for conducting the study. Initially, the clinicians at the Centre identified the potential participants (N=162) among their clients and referred them to the investigator. These clients were then screened for depression using Beck's Depression Inventory and people with mild level of unipolar depression were selected for the study while those with moderate and severe level of depression were excluded.

Thus a total sample of 120 adults, ranging from 18 to 45 years of age, with mild level of unipolar depression were selected by purposive sampling method to serve as the sample for the study.

Informed Consent and Voluntary Participation: The subjects were included in the study based on their willingness and voluntary decision of participation in the study. The subjects were then given a briefing about the study, intervention and the potential benefits and risks of participation. Informed consent for participating in the study was obtained from the subjects. Whenever needed, the investigator briefed on the purpose of the study highlighting what would be expected from them. Further, the subjects were ensured that all their responses would be kept confidential. They were also clearly informed that their data will not be revealed for any other purpose for any reason. All the queries and clarifications from the participants were resolved then and there. The institutional ethical board also gave their approval for the study.

Pilot Study:

The researcher then carried out a pilot study in a sample of 20 persons randomly with mild levels of depression. This pilot study was done with the following objectives:

- ❖ To pretest the research instruments of the study.
- ❖ To ensure whether the tools were fulfilling the conceptual framework.
- ❖ To ensure the effectiveness of the intervention in the study.
- ❖ To ensure the method adopted were effective and check whether the procedure was followed systematically as planned.
- ❖ To fine tune the intervention procedures.

The result of the pilot study was successful in fulfilling the above objectives especially in the fine tuning of the intervention tool [Recorded Flute Music CD (Priyadarsini, 2014)]. The researcher had initially taken 10 different ragas and was able to finalize 5 ragas for the CD based on the pilot study.

Next the subjects were given standardized questionnaires/inventories of Beck's Depression Inventory (Beck et al. (1961) (Revised, 1971)), Bharathiar University Resilience Scale (BURS) (Form A) (Annalakshmi, 2009) and Rosenberg's Self-esteem Inventory (Rosenberg, 1965) to assess the level of depression, resilience and self-esteem and a Personal Data Sheet to gather their demographic details. The questionnaires were administered in person to the respondents, once the permission was granted by the clinic authorities. The completed psychological tools were then checked for incomplete responses and if any were found, they were excluded from the data. The sheets, which were complete in every sense, were then scored manually and interpreted according to the scoring procedure of each scale. The data collection process was carried out in three phases: pre-test phase (before the intervention), post-test phase (immediately after the intervention) and follow-up phase (three months after the interventions were stopped).

The researcher chose three interventions for this study namely Carnatic Music Therapy (CMT) plus standard care, Pranayama plus standard care, CMT and Pranayama plus standard care with an intention of reducing depression and further enhancing their resilience and self-esteem. Thus thirty subjects each were then randomly allocated to the four different groups of intervention; CMT plus standard care (n=30) Pranayama plus standard care (n=30), CMT and Pranayama plus standard care (n=30) and Control group, standard care only (n=30).

Phase I: Pre-test

As the first step, the subjects were asked to fill the Personal Data Sheet (Priyadarsini, 2014) which focused on their demographic data. Then the level of psychological factors of depression, resilience and self-esteem were assessed from the subjects using standardized questionnaires/inventories of Beck's Depression Inventory (Beck et al. (1961) (Revised, 1971)), Bharathiar University Resilience Scale (BURS) (Form A), (Annalakshmi, 2009) and Rosenberg's Self-esteem Inventory (Rosenberg,

1965). The subjects were requested to complete the questionnaires and then return them to the investigator immediately. A good rapport was maintained with the respondents and due care was given to clarify all the doubts and queries of the respondents while filling up the questionnaires. The subjects were then informed that they would be approached again soon after the intervention to furnish responses on the same questionnaires.

Phase II: Intervention

In this phase, the sample was then randomly allocated to four different intervention groups with 30 subjects in each group. Carnatic Music Therapy (CMT), and CMT and Pranayama (combined) were the interventions used by the researcher in the study. The four groups in the study were as follows:

Group I: Carnatic Music Therapy (CMT) plus standard care.

Group II: Pranayama plus standard care.

Group III: Carnatic Music Therapy and Pranayama plus standard care.

Group IV: Control group, Standard care only.

a. Carnatic Music Therapy (CMT)

The ancient system of Nada Yoga, which dated back to the time of Tantras, has acknowledged the impact of music on body and mind and put into practice the vibrations emanating from sounds to uplift one's level of consciousness. It is the Indian genius that recognized that the ragas of Carnatic music are not mere commodities of entertainment, but the vibrations in their resonance is capable of synchronizing with one's moods and health. By stimulating the moods and controlling the brain wave patterns, ragas work as complementary medicine. Various ragas have been recognized to have its definite impact on some physical and psychological ailments (Sairam, 2004).

There are diverse techniques used in music therapy, they can be broadly classified as 'Active', in which people re-create, improvise or compose music, and 'Receptive', in which they listen to music (Bruscia, 1998).

In this study receptive music therapy technique was used in an individual (therapist-client) setting. The basic aim of the intervention is to encourage and engage

clients in deeper understanding of the self and making effective expression of their emotions and verbal interaction with the help of music. The therapist's role is to actively facilitate and support the client's therapeutic process by using the elements of music combined with reflective discussion. This therapeutic process is based on giving meaning to thoughts, images and emotional content emerging from the musical experience and processing it into a verbal domain.

The intervention developed by the researcher was based on five Carnatic music ragas namely Atana, Kanada, Mohanam, Revagupti and Neelambari. The ragas were selected according to the expert advice from professionally trained Carnatic musicians and also music therapists. A recorded instrumental flute music CD made by the researcher (Priyadarsini, 2014) in the five ragas were used for the intervention. The instrumental music was specifically chosen in order to avoid semantic interference of lyrics into the participant's mood and thoughts. A total of 20 bi-weekly sessions were given, each session lasting for 60 minutes. During the session, the subject was exposed to passive listening of the five Carnatic music ragas played on the flute. And the five ragas were played in the same order in all the sessions since there is a step by step procedure to be followed in the intervention which will be discussed in the next session.

The following is the procedure of the Carnatic Music Therapy:

➤ **Initial counselling**

The subject was given a general awareness on music therapy and also on the effects of Carnatic music ragas on human mind. Also the subjects were clearly advised to follow the instructions of the therapist during the sessions.

➤ **Passive listening of Ragas**

The subject was made to sit in a relaxed and comfortable posture in a calm and quiet atmosphere with his/her eyes closed. The music was then played through the headphones.

➤ **Instructions**

The following were the instructions given to the subject before playing each raga:

Raga 1: ATANA

“Now take a comfortable position.....sit as comfortably as you can on the backrest, with all parts of your body loose and free.....Be calm and comfortable. Keep your eyes closed tightly...As you go ahead listening to the music, observe the thoughts that come to your mind. Freely observe the thoughts and images. Focus on the thoughts and images....Avoid extra movements of the body....Make your body calm and comfortable...Now listen to the musical piece...”

The subject is asked to focus on his/her thoughts generally that comes to the mind. After hearing the 5 minutes musical piece, the subject is then asked to reflect on those thoughts and images and freely express the feelings they provoke.

Raga 2: KANADA

“Now again be in a comfortable position...Be calm and comfortable. Keep your eyes closed tightly...As you go ahead listening to the music, feel the melody and deeply get involved in it...Observe the thoughts that comes to your mind.....Focus on the negative thoughts and images that the music provokes.....Give a vent to your emotions as you go ahead deeper into the tunes..... Now listen to the musical piece...”

The subject is asked to focus particularly on the negative thoughts that caused a feeling of depression. After hearing the 5 minutes musical piece, the subject is asked to reflect on those negative thoughts and images and freely express the feelings they provoke.

Raga 3: MOHANAM

“Get back to take a comfortable position.....Sit as comfortably as you can on the backrest...Make your body loose and free.....Be calm and comfortable. Keep your eyes closedAs you go ahead listening to the music, feel the soothing effect of music.....Feel the positivity in the musical piece...Observe the thoughts that comes to your mind. Focus specially on the positive thoughts and images that springs up in your mind...Try to recall your pleasant memories...Relax your body and mind while enjoying the music...Now listen...”

The subject is asked to enjoy the positivity in the music and relax deeply by focusing on the pleasant thoughts and images and also to recall positive memories. Then the subject is asked to reflect on the positive thoughts and images.

Raga 4: REVAGUPTI

“Now again be in your comfortable position.....Make yourself more relaxed and free.....Be comfortable. Keep your eyes closed.....Listen to the very beautiful piece of music...Dive deeply into the feelings of strong positivity...Feel the soothing music and power of pleasant emotions of the tunes.....Observe the thoughts that comes to your mind. Focus on the positive thoughts and images...Try to think of your own strengths and your aim in life as you enjoy the music.....Feel that your body and mind is getting strengthened with positivity.....Feel that your mind is getting cleansed by bathing in the pleasant music.....Now listen to the wonderful musical piece...”

The subject is asked to focus strongly on the pleasant positive thoughts. He/she is asked to think about his/her strengths and aim in life. After that, he/she is asked to reflect on these strengths and aims.

Raga 5: NEELAMBARI

“Now take a comfortable position.....Sit as comfortably as you can on the backrest, with all parts of your body loose and free.....Keep your eyes closed tightly...Feel the deeper state of relaxation.....Deeply dive into the music...Feel that nothing exist except the music...Experience a sense of safety, security and belongingness...Feel as if you are merging into the tune and becoming one with the music...Continue to sit in the relaxed posture with eyes closed for 3-4minutes after the music had been stopped...Relax more and more...Enjoy the relaxation.....Deeper and deeper.. Now experience it...”

The subject is asked to go into a deeper state of relaxation and experience a feeling of safety, security and belongingness. After the music, the subject is asked to continue to sit in the same posture with eyes closed for 3-4 minutes and then open the eyes.

➤ **Epilogue**

The subject is asked to discuss his/her feelings after each session. He/she is also asked to maintain a diary.

b. Pranayama: Anuloma Viloma (Mental Nadi Shodhana)

Anuloma viloma is a panacea for all imbalances. When the balance in autonomic nervous system is restored, the root causes of many diseases are tackled and removed over a period of time. Regular practice of Anuloma Viloma will help to maintain the balanced working of pineal gland. It activates the frontal lobe of the brain and ajna chakra, thereby inducing, tranquility, clarity of thought and concentration. It also helps in removing depressive tendencies and vertigo. It purifies and regulates the entire pranic system by influencing the nadis and chakras which improves the vitality at all levels (Saraswati, 2009).

Anuloma Viloma pranayama shows an impact on the brain hemispheres by alternatively stimulating the right brain and the left brain. Anuloma Viloma is a mental adaptation of Nadi Shodhana Pranayama in Patanjali's yoga sutra. This technique can be successfully practiced in one's daily sadhana. It gives a calming effect on the nervous system and will be effective if practiced in stressful situations. The autonomic nervous system is also stimulated and then relaxed by the practice of Anuloma Viloma. This pranayama is an on-the-spot tranquilizer, which promotes clarity of mind and awareness and it has no adverse side-effects.

The intervention of Anuloma Viloma Pranayama was given to each subject in an individual setting. The duration of each session was 1 hour with the pranayama being 30 minutes long.

The procedure for Anuloma Viloma Pranayama is as follows:

❖ **Initial Counselling**

The subject was given a general awareness on Anuloma Viloma Pranayama and also on the effects of Anuloma Viloma Pranayama on human brain, mind and body. The subject was also clearly advised to follow the instructions of the therapist during the sessions.

❖ Instructions

The subject was asked to follow the below instructions to do the AnulomaViloma Pranayama:

- Assume any comfortable posture.
- Close the eyes and relax the whole body.
- Become totally aware of the breathing process.
- Feel as though nothing else exists except the breath.
- Mentally direct the breath in and out of the left nostril.
- Feel the breath flowing in and out of the left nostril only. (The use of imagination is necessary in the beginning)
- Continue breathing through the left nostril mentally for one or two minutes.
- Repeat the same procedure with the right nostril.
- Feel that the whole flow of breath is moving in and out of the right nostril only.
- Continue breathing through the right nostril mentally for one or two minutes.
- Be aware of each breath throughout the practice.
- Now mentally direct the breath in and out of the alternate nostrils.
- Mentally inhale through the left nostril and exhale through the right.
- Then, mentally inhale through the right nostril and exhale through the left.
- This is one round of Anulomaviloma (mental alternate nostril breathing)
- Practice 27 rounds of Anulomaviloma.

❖ Epilogue

The subject is asked to discuss his/her feelings after each session. He/she is also asked to maintain a diary.

c. Carnatic Music Therapy and Pranayama (combined)

For the third group, the intervention consisted of a combination of Carnatic Music Therapy (CMT) and AnulomaViloma Pranayama was also given in an individual setting. During each session, CMT was followed by AnulomaViloma Pranayama procedure and lasted for 1 hour and 30 minutes.

Initial counselling

The subject was given a general awareness on Carnatic Music Therapy and Anuloma Viloma Pranayama. He/she was educated on the effects of Carnatic music ragas and AnulomaVilomaPranayama breathing on the human mind. Also the subject was clearly advised to follow the instructions of the therapist during the sessions.

✓ Instructions

The same instructions and procedures given above in the sessions for Carnatic Music Therapy and AnulomaViloma Pranayama were followed. CMT will be given first, followed by AnulomaViloma Pranayama.

✓ Epilogue

The subject is asked to discuss his/her feelings after each session. He/she is also asked to maintain a diary.

d. Standard Care

Standard care refers to the usual treatment provided for MDD or Unipolar depression. This included psychotherapy interventions (individual sessions) conducted by specially trained therapists, medication/pharmacotherapy (antidepressants) and psychiatric counselling (appointments for advice, follow-up and support when needed).

Phase III: Posttest

Immediately after the completion of the intervention, data was collected, from all the four groups, on the psychological variables under study. For this purpose, the concerned respondents were once again requested to furnish their data on the same parameters of depression, resilience and self-esteem using the same tools used previously in the Phase I of the study.

Phase IV: Three Months Delayed Follow-Up

After the completion of the intervention, three months were allowed to elapse before collecting the data on the psychological factors under study. This was done to assess the levels to which the psychological variables were maintained without any interventional support. All the participants of the four groups were requested to furnish

their data on the same parameters such as depression, resilience and self-esteem using the same questionnaire/inventory used in the pretest and posttest phases.

ANALYSIS OF DATA

The present study followed the Pre-test, Post-test, Follow-up with Control Group Design. This study was intended to examine the effectiveness of three different interventions on the various psychological variables over three phases: pre intervention, post intervention and three months delayed follow-up. The data was analyzed statistically as follows: Chi-square test was used to test for homogeneity of the sample while Pearson's correlation was used to find out whether there were any relationships between the variables of the study. One-way ANOVA and Post-hoc analysis were used to find out the effectiveness of the intervention in the sample.