Research Methodology
RESEARCH METHODOLOGY

Research Methodology indicates a general pattern for planning and organizing the procedure to collect valid and reliable data for the problem of the study. It shows the method of conducting research. It is the way to systematically solve the research problem and achieve research objectives. It is a method design to prove the hypothesis.

The current chapter deals with methodology adopted for the study. This includes various steps which supported to study the research problem logically. This chapter covers various components like research design, sampling technique, sample size, inclusion-exclusion criteria, data collection tools used to measure suppressed anger and emotional competence, area of the study and plan for data analysis.

Statement of the Problem

A research problem refers to the identification of problem or difficulty which a researcher experiences in the context of either a theoretical or practical situation and wants to obtain a solution for the same.

“What is the effect of emotional catharsis through dance therapy in suppressed anger and emotional competence among School Students?”

Objectives of the study

The specific and primary objectives of the study were:

- To study the impact of emotional catharsis through dance therapy in suppressed anger
- To study the impact of Navras dance therapy in emotional competence

Hypothesis

This is a tentative answer focusing on the research problem and provides way to explore study. Hypothesis also helps as a framework for probable interpretation, drawing results and conclusions. It is a relationship between two or more variables.
Null Hypothesis

Null hypothesis always states that there is no significant difference between the statistic and the parameter, and whatever observed difference is there is merely due to fluctuations in sampling from the sample population (JNTU, 2008). After reviewing the literature and identifying the gaps, present study attempts to test the following hypotheses.

- **HO 1:** There will be no significant effect of catharsis through dance therapy on suppressed anger among school students
- **Alternative Hypothesis:** Catharsis through dance therapy significantly reduces suppressed anger among school students
- **HO 2:** There will be no significant effect of Navras dance therapy on emotional competence among school students
- **Alternative Hypothesis:** Navras dance therapy significantly enhances emotional competence among school students

Research Design

Research design is the method for the enquiry of a research study. It is the task of defining the research problem. It enables the researcher to study the research problem in a plan, structure and strategy of investigation conceived so as to obtain answers to research questions and control variance. It also deals with identification of variables, assessment of variables, intervention of independent variable and its impact on dependent variables.

The Pre-test Post-test experimental-control group design is included in the study to check the effectiveness of intervention (pretest) before intervention and (posttest) after intervention. In control group, no intervention is conducted. There are at least two variables in an experimental design. One is independent variable and the other is dependent variable. The dependent variable is considered as ‘output’ or ‘effect’ or ‘is tested to see if it is the effect’. In the current study independent variable is catharsis through dance therapy and dependent variables are suppressed anger and emotional competence. The researcher studied the role of emotional catharsis through dance therapy in suppressed anger and emotional competence in 120 school students of experimental group and another 120 school students (same population-
age, class, school) of control group who were not given any intervention. Though one group pre test and post test design could be taken for this study, but to encounter the demerits of this design and to incorporate the merits of experimental control group design, both the designs were combined (pre test post test and experimental control group design). It is planned because it is more robust design which is tool proof and restricts the possibilities of intervening variables and extraneous variables to contaminate the results.

Paired sample t-test is used in the current study to test various hypotheses mentioned elsewhere. The t-test is a part of the parametric family of tests, and used to assess whether two groups differ on a continuous variable or finding differences between groups. The grouping variable must be the independent variable and the continuous variable must be the dependent variable. As with all statistical tests, each t-test comes with a series of assumptions that need to be met in order for the test to give accurate results. In this research paired samples t-test is applied to see the results. It is a statistical technique that is used in pre-post studies or before-after studies to compare two population means of two matched pair samples that are correlated or is a case-control study. This test is also known as a repeated measures t-test. Here individual different sources of error are removed, unlike the independent-samples t-test, which increases the potential power of the test.

Table-3.1. Research design of the present study

<table>
<thead>
<tr>
<th>Total No. of samples N = 240</th>
<th>Phase I Pre-test Dependent variable</th>
<th>Phase II Intervention Independent variable</th>
<th>Phase III Post-test Dependent variable</th>
<th>Statistical Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group 120 girls and boys</td>
<td>Suppressed Anger Emotional Competence</td>
<td>Emotional Catharsis through Dance Therapy (Navras in Bharatnatyam and Kuchipudi) for 50 sessions each session of one hour duration in tenure of three months</td>
<td>Suppressed Anger Emotional Competence</td>
<td>0.05</td>
</tr>
<tr>
<td>Control Group 120 girls and boys</td>
<td>Suppressed Anger Emotional Competence</td>
<td>No Intervention</td>
<td>Suppressed Anger Emotional Competence</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Table (3.1) shows the research design of present study. Catharsis through dance therapy was the method for intervention. Before the intervention of catharsis through dance therapy a pretest of suppressed anger and emotional competence was conducted.

It is essential to select a small number of students as a representative of total population for the purpose of the research as no investigator can study on the entire population. It aims at gathering the maximum information with the minimum effort, cost, time and energy and to set out the limits of accuracy. The sample size is designed as depending on the mode of the study. In this study, students were selected randomly through random sampling technique. Among all 240 students (86 girls and 154 boys) would comprise as the sample for study. Those children who were willing to participate in the study and were willing to learn dance were taken.

**Table-3.2. Sample Plan for the study**

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of Samples</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group</td>
<td>120</td>
<td>Age range 13 to 16 Intervention for three months</td>
</tr>
<tr>
<td>Control Group</td>
<td>120</td>
<td>Age range 13 to 16 No intervention</td>
</tr>
<tr>
<td>Total</td>
<td>240</td>
<td>School Students</td>
</tr>
</tbody>
</table>

**Area of the Study**

The setting for this study is DAV School at Madharam of District Khammam in Telangana state. As this school management promotes children in extra-curricular activities including dance for over all development. School has allowed with proper time and venue to conduct 50 dance sessions each of one hour in tenure of three months as required for the current study.
Psychological tools used in the present research

Data collection is done through applying standardized questionnaires. Tools are important part to collect data for testing the research hypothesis. Various tools are required to collect information from the sample of the study. All the important results of the research are based on the selection of the tools. This refers to purposive gathering of information relevant to the subject-matter of the study from the units under investigation. The researcher reserved the research objectives and research methods in mind to select different data collection tools.

1. Anger Expression Scale for Children (AESC) was used to measure suppressed anger of school students. It was prepared by Phipps (2008) in collaboration with group of pediatric psychologists and psychology trainees on the basis of PAES-III; Jacobs et al., 1989; STAXI; Speilberger, 1988. AESC has 26-items with a four-point Likert response format – one mark is given for almost never, two for sometimes, three for often, and four for almost always with higher values keyed to greater endorsement of the items. This reflected trait anger (10 items), anger expression (6 items), anger in (4 items) and anger control (6 items). This scale was standardized by confirmatory factor analysis (CFA), factorial invariance and construct validity to compare between two groups, multivariate analyses of variance and covariance were conducted to examine scale-level group differences, and co relational analyses were conducted to examine the test–retest stability and concurrent validity of the AESC. Test-retest reliability ranged between 31 and 60 with 6 and 12month intervals. The Internal consistency of Cronbach's alpha coefficient for Trait Anger is .84, Anger Expression is .69, Anger-In is .71, and Anger Control is .79. Results indicated robust correlations between Trait Anger and Anger Expression subscales. The instructions were given to students before they are asked to fill the consent forms, exactly as mentioned in the AESC manual. “Everyone feels angry from time to time, but people differ in how they act when they are angry. Below are some statements that people use to describe themselves and how they act when they feel angry. Read each statement carefully, and decide how often the statement applies to you when you feel angry.”
2. Emotional Competencies Scale (ECS) was used to measure emotional competence of school students. It was prepared by Bharadwaj & Sharma (2007). This scale contains 30 items; it is a five point Likert scale having five alternatives to each item. Scoring is done as 1, 2, 3, 4, and 5 respectively. The higher is the gained score the high is the level of emotional competence, dividing into five different competencies: adequate depth of feeling (ADF) 6 items, adequate expression and control of emotions (AEC) 6 items, ability to function with emotions (AFE) 6 items, and ability to cope with problem emotions (ACPE) 6 items, enhancement of positive emotions (EPE) 6 items, with total reliability.74 through test-retest method and.76 through split-half method. The validity of this scale was determined with factor ADF and AFE of 16 personality factor questionnaire and found to be highly correlated (.64 and.69 respectively). The instructions were given to students before they are asked to fill the consent forms, as mentioned in the EC- Scale. Some incomplete statements are given in this scale that has to be completed with the tick mark which suits you among the five alternatives.

Procedure
The conduction of the study followed three phases.

Phase I-Pre Testing
The aim of pretesting process is to ensure that the baseline of suppressed anger and emotional competence of both experimental and control group is same and any change in post test scores of dependent variables could be attributed to the impact of intervention. It is the basic assumption of an experimental study where independent variable is manipulated and its effect is observed on the dependent variable. The unequal base line of dependent variables may contaminate the results, may underestimate or over estimate the impact of intervention on dependent variable.

- **Step I:** School principal is contacted to seek permission (request letter enclosed in appendix A) to conduct the present study explaining its importance for students in their mental and emotional health.
- **Step II:** The students of age range 13-16 years are randomly selected.
• **Step III:** A sample of 120 school students (including girls and boys) are selected from classes VII, VIII, IX and X on the basis of students willing to participate in dance workshop.

• **Step IV:** Students consent forms are filled (photos enclosed in appendix G) and students are briefed about the dance workshop. Students are informed that they will be learning the basics and two compositions (Dashavatar and Raudra Tandav) in Bharatnatyam and Kuchipudi Indian Classical Dance forms.

**Phase II-Intervention**

Since it is an experimental study, with intervention of the independent variable (Emotional catharsis through dance therapy to see the impact of it on dependent variable (i.e. suppressed anger and emotional competence) it is most important, crucial and the vital part of the study. After the formal permission from the principal and consent from students, a combination of Bharatnatyam and Kuchipudi Dance with the Lyrical composition of Dashavatar and Raudra Tandav themes that range nine core emotions is taught for 50 sessions, each session of one hour duration, six days in a week except Sundays and holidays in a tenure of three months. Sample 120 students of experimental group (class VII, VIII, IX and X) underwent intervention training and none of them withdrawn during dance training. These classes were opted because they represent a true picture of adolescence and these stages are very crucial for the development of emotional competence and emotional expression. Children at a young age are much more receptive to new things as they have still not formed their own opinions. But they are active, energetic and move naturally. They move to achieve mobility, they move to express a thought or feeling, and they move because it is joyful and feels wonderful. When their movement becomes consciously structured and is performed with awareness that’s dance. It is pre-verbal, beginning before words can be formed. It is innate in children before they possess command over thoughts, emotions and language. Thus even the smallest movement during intervention was encouraged, as it remained an important form of self-expression. Students are encouraged by saying the words of Leighton, 1997 that dance like no one is watching you. During the dance practice they were
advised to disclose and express all conflicts, stressful events, frustration, and tension, anxiety through dance (physical energy, gestures, body movements, postures and facial expressions) that are experienced in day to day life.

Students are open to learn creatively by doing/practice or kinetic learning through physical and sensory experiences (Dewey, 1915; Piaget, 1950). Learning dance and learning verbal language are woven together and incorporated into a fabric of communication and understanding. Vocal communication is entangled to children as they understand nonverbal movements better. Nonverbal communication represents two thirds of all communication (Rosenberg, 1999). It’s important for young children to understand that it is possible to portray a message both verbally and with the correct body signals and also to be able to interpret these signals from other people. Dance provides an opportunity to learn multiple skills and a way to affirm an inner life (Stinson, 1990). The study of dance and movement can help a child develop sensory awareness, cognition and an understanding of their own body language as well as others. Whilst it is relatively simple to express without words straightforward emotions such as ‘happy’ and ‘sad’, the study of dance can teach a child how to express physically more complex emotions and how to read and react when someone else is physically emoting.

Reviews suggest any dance style can be used as dance therapy, in this present study researcher had implied a combination of South Indian Classical Dances Kuchipudi and Bharatnatyam, as these are the most ancient dances that are deep rooted on Navras (nine emotions). Students are trained to depict these navras (nine emotions) through abhinaya (facial expressions). These dances are laid with four ways of abhinaya, namely, Angika (physical), Vachika (verbal), Aharya (external) and Satvika (psychological) through these ways students have learned to portrait joy, sorrow, anger, fear, disgust, courage, wonder, laughter, and peace. Stayi Bhava (stable expressions), Vibhava (cause of expressions), Anubhava (effect of expressions) and Sanchari Bhava (subordinate of expressions) constitute the state of rasa (emotion). Indian Classical Dance is based on devotion and feelings are dedicated to God that has power to transform destructive thoughts to constructive thoughts.
Role of Emotional Catharsis through Dance Therapy in Suppressed Anger and Emotional Competence Among School Students

The symbolical meaning of yoga is the union of individual soul to supreme soul that initiates from physical level to mental level then emotional level to social level and spiritual level and achieve excellence (Iyengar, 2005; Satchitananda, 2012; Vivekananda, 2015) through practice of any type of yoga like bhakti yoga, hatha yoga, raja yoga, laya yoga etc and dance is a vital part in tune assist to achieve yogic goal (Nagendra, 2016).

Natyashastra says that Abhinaya is the art of “exhibiting the meaning of what one depicts”. During dance gestures, body movements, postures (angas), facial expressions (abhinaya) are coordinated with pratyanga and upaanga, the practitioner is said to have purification of emotions (bhavashudhi) and body (angashudhi) thus one could attain perfection through experiencing and expelling pent up emotions like anger, sorrow, hatred, disgust, fear, etc. Indian Classical Dances comprises Nritta (Music element), Nritya (Dance element) and Natya (Dramatic element). The rhythmic element includes musical instruments and tones that are taal, sur, raag. The dance element includes physical movements, postures with expression that conveys feelings with the help of different emotions like joy, sorrow, anger, love, hate, disgust, peace, etc.

Dance provides a huge opportunity to communicate a story, an idea, and an emotion. Students use their body, limbs, hands, face, and eyes to express emotions. Thus the main purpose of dance is fulfilled by evoking Rasa or emotion in them. Abhinaya Darpanam (Mythological text on Indian Classical Dance) of Nandikeswara says:

यतो हस्तास्ततो दृष्टिः, यतो दृष्टिस्ततो मनः।
यतो मनस्ततो भावः, यतो भावस्ततो रसः।।

Translation in English: “The eye movements follow the hand formations; the mind follows the eyes and generates emotions and emotions rise to feelings”
Dance needs to evoke emotions is the essence of this verse and that needs hand, head and heart to go in a synchronization (Daithankar, 2015). Bharatmuni in Natyashastra articulate that there are 33 emotions (Dadhich, 2010) that deal with four Abhinaya (expressions) namely Angikabhinaya (Bodily gestures and postures), Vachikabhinaya (lyrics of the song), Aaharyabhinaya (ornamental description), Sattvikaabhinaya (depiction of mental state of mind) (Sarojbala, 2015).

*Angika Abhinaya* (Bodily gestures and postures) involves expressing emotions according to lyrics with specific gestures, postures, facial expressions and bodily movements. Those are named as Anga, Pratyanga and Upanga. There are six Angas namely Siras (head), Hasta (hands), Vaksas (chest), Parsva (sides), Katitata (hips), Pada (leg) and Griva (neck) is considered to be the seventh anga. Hasta Abhinaya (hand gestures) is a part of anga that is important aspect in Indian Classical Dance and named as Mudra in Natyashastra. There are many mudras used in classical dance, among them the major ones are Abhaymudra, Dwipataka, Samyukta, Asamyukta, Tripataka, Shikhar Mudra, Linga Mudra, Katakamukham, Kattarimukham, etc. There are six Pratyangas those are Skandha (shoulders), Bahu (arms), Prastha (back), Udara (stomatch), Uru (calves) and Jangha (thighs), Manibandha (wrist), Kurpara (elbows) and Janu (knees) are also considered as Pratyanga, the twelve Upangas are Drsti(eyes), Bhru (eye-brows), Puta (pupil), Kapola (cheek), Nasika (nose), Adhara (jaws), lips, teeth, tongue, chin and face.

*Vachika Abhinaya* (lyrics of the song) is expressed through literature like songs, poems, dramatic dialogues delivered by voice or speech. This plays a very important role in creating the mood and emotion of the song. These are expanded by Angika Abhinaya (Bodily gestures and postures).

*Aharya Abhinaya* (ornamental description) involves the ornaments, make-up and costumes, hair-styles, flowers worn for particular character along with the stage props and decor. Kuchipudi and Bharatanatyam dance outfit contains as Payjama style or Sari style and ornaments are forehead set (Netti chutti, Chandra, surya), flowers for the hair, earrings (Jumki), ear chain (Mattal), Nose rings (mukutti), bangles (Hasta Kadakam), waist belt (vadyyanam), and very importantly the bells tied to the feet (Gungroos).
Sattvika Abhinaya (depiction of mental state of mind) is based on the emotional aspect. *Sattva* is the Sanskrit term that means pure or real. This practice creates to experience feelings within naturally by projecting through *angika* and *vachika*, which can be expressed only if it is really heartfelt. Thus it is a Psycho-Physical representation of playwrights. There is eight Sattvika Abhinaya or reactions made during emotional expression. They are *Stambha* (motionless or statue posture because of a shock), *Swedha* (perspiration), *Romancha* (thrilled or horripilation), *Ashru* (tears), *Vepathu* (trembling or Shivering), *Pralaya* (faint out of shock), *Vaivarnya* (change of skin nature like red color in anger emotion), *Swarabhaga* (change of voice tone while emotions overpower).

In Shaiva Siddhanta tradition, Lord Shiva is considered as the pioneer of dances and named as ‘Nataraja’, the king of dancers. When Shiva dances, *Saraswati Devi* (the Goddess of Wisdom) plays the Veena, *Indra* (Lord of Heaven) plays the flute, *Brahma* (The Creator) keeps the rhythm, *Lakshmi Devi* (the Goddess of Wealth) sings, *Vishnu* (Lord of Operations) plays the Mrudanga and all the other deities stand around and watch the dance. According to Bharat Muni Lord Shiva was very much fond of dancing every evening hence he conceived the dance to create the world. He gave rhythm to the universe, movement to the sun, moon and the stars. He created the new rhythm by his body movements, great poses that symbolized the Evolution, Preservation and Destruction. The destruction was expressed by the Raudra Tandav Dance of anger. The *Tandava* takes its name from Tandu. Tandu was the attendant of Lord Shiva. In the chapter four of Natyashashtra narrates, Tandava is employed through 108 Karanas and 32 Angaharas that is said to be as methodology of Tandava or Tandava Lakshanam (Devi, 1990; Varadpande, 2016). Karana is the combination of mudras or hand gestures with feet to figure a dance posture. Tandav has its own technique, vigorous footsteps, and choreography depicting specially anger through facial expressions, gestures, postures and brisk movements. There are seven different types of Tandava as enlightened in *Sangeet Ratnakar*, chapter 5, verse 5 and 6. The Tandava with joy is called Ananda Tandava and that which is performed in violent mood anger is called Raudra or Rudra Tandava. The other types of Tandava are Tripura Tandava, *Sandhya Tandava*,
Samara Tandava, Kaali Tandava, Uma Tandava and Gauri Tandava. In Rig Veda Tandava is described as the vigorous dance of the element on the stage of the cosmic field. The majesty is seen when Nataraja dances. The earth trembles, the sky and the stars are disturbed by the movement of his powerful hands, at the impact of his whirling matted locks of hair heaven shudders (Coomaraswamy, 2016). In Sandhya Tandava, the Shivapradoshastotra articulates. The Gouri Tandav and Uma Tandav are fearsome in depiction. In these dances, Shiva assumes the form of Bhairav or Veerabhadra and is accompanied by Gouri or Uma. He performs this fearsome dance with the spirit attendants in graveyard (Nandagopal, 2001). Ganesha, the younger son of Lord Shiva depicted Tandava Dance with eight armed form (Ashtabhujatandavaanrityamurtis) that is seen in different temple statues. The Bhagavata Purana describes Lord Krishna performing Tandava Dance on the head of the black serpent (Kaliya Naag) in Yamuna River at Gokul. Jain tradition believes that Indra has performed the Tandava Dance in honor of Jain Tirthankar Rishabhadev.

The personification of Lord Nataraja (an expression of dancing Lord Shiva) is paradoxically uniting his inner tranquility, and outside activity (Coomaraswamy, 2015). The circle around the figure is purifying maya to represent the cosmos. Nataraja has four hands – one of the two right hands hold a drum signifying sound representing the rhythmic nature of life. The other right hand is in Abhayahastha, (a gesture representing protection for his devotees). Out of the two left hands, one hold fireballs to purify animate or inanimate creation signifying destruction and the other points to his raised dancing foot which are liberation from jivas (individual souls) or release from bondage. The elephant hide and tiger skin show that Shiva reaffirms his powers. The right foot on the dwarf symbolizes destructing and crushing the ignorance in the people’s mind, illuminating the world with light of knowledge. The Tandava dance represents the five activities. These are the manifestations of eternal energy and symbolize the cosmic aspect of dance with the rhythm of birth and death including evolution, preservation, destruction, removal concealment, illusion and emancipation and salvation of the world. The facial expression of Nataraja form of Lord Shiva also has distinctive features: Eyebrows pulled down together, wide open,
The dramatic element includes role play or act on mythological theme from various epics like Ramayana, Shrimad Bhagwat, Mahabharata, Purana, Shastra, etc. Indian Classical Dance was first introduced and presented by Lord Shiva and his disciples to Sati (first incarnation of Goddess Parvati) at Kailash Mansarovar to lead a joyful wedded life. Lord Shiva along with His disciples presents the art of dance and music to entertain Sati as she was away home for the first time. It was happy moments going at Kailash Mansarovar but Prajapati Daksh (Father of Sati) insulted Shiva that made Sati to depart her life by jumping into sacrificial fire. With this cause Shiva started doing Raudra Tandav (anger dance of Lord Shiva). Many years later Dashavatar dance style came into life at King Himavan’s (father of Goddess Parvati) palace with the motto to launch the expressive dance art of ‘Natyashastra’ on earth. Here Lord Shiva played the role of main dancer; Nandi (disciple of Lord Shiva) and Devarshi Narad (Saint of Gods) played the music and enacted the upcoming ten incarnations of Lord Vishnu many years before of incarnation in advance.

**Raudra Tandav** (Shiva’s anger dance) is believed to be performed by Lord Shiva in divine fury against evil. The dance movements and expressions are vigorous and aggressive explained the fury of nature, unexpected calamities and natural disasters. In Indian mythology, Lord Shiva is said to be the Destroyer of vices or immorality. Destruction is necessary to construct something new for a meaningful change (Pandya, 2016). Shiva performing the Raudra Tandav (violent dance) creates havoc in the three worlds namely the sky, the earth and the nether world. In the current research ‘Raudra Tandav Stotra’ (Lyrics are provided in appendix H) which was sung in the praise of Lord Shiva by the demon king Ravana. The stotra covers the description of Lord Shiva and His dance. He was the great disciple of Lord Shiva and wanted to prove his deep devotion for Him. This dance theme was selected to see whether it could release suppressed anger of students after practicing it for three months (50 sessions).
Lord Vishnu descends on earth from time to time whenever there is a decline in religious practice to eradicate evil forces and restore dharma. Lord Krishna (Lord Vishnu’s eighth incarnation) articulates in Shrimadbhagwat Geeta in Chapter 4; Shloka 8, "To deliver the pious and to annihilate the miscreants, as well as to reestablish the principles of righteousness, I manifest myself, millennium after millennium". In the Vedas and Garuda Purana, it is said that the Lord, manifests himself in innumerable forms to protect His creation. Each and every incarnation has a particular mission. A similar thread appears in Buddhism were people await for the coming of Maitreya- Buddha’s prophesy (Lord Vishnu’s ninth incarnation) to arrive on earth after Gautama Buddha’s nirvana or salvation (Klostermaier, 2007).

The first four incarnations of Lord Vishnu namely Matsya, Kurma, Varaha and Narsimha appeared in Satya Yuga or Golden Age. The next three incarnations are Vaman, Parshurama and Rama in Treta Yuga. The next two incarnations Krishna and Buddha are from the Dwapara Yuga and the tenth incarnation in Kali Yuga. In the Manusmruti, Vishnu Purana and the Bhagavata Purana, the Kali Yuga is described as the period of change with the defeat the wicked and liberates the virtuous for a new Yuga (Buhler, 1886; Trichiprasanan, 2012).

Dashavatara is an extract of Sanskrit term for ten incarnations of Lord Vishnu. (Dalal, 2014) Bhagavata Purana deals with ten incarnations of Lord Vishnu in the chapter 12.2 Shlokas 16-17 (Prasad, 2016). In the first incarnation Lord Vishnu takes the form of a Fish (Matsyavatar) to protect Manu from deluge then takes his boat to the new world. In the second incarnation Lord Vishnu takes the form of a Tortoise (Kurmatavatar) were gods and demons churn the ocean of milk with the mount Mandara as a churning staff to get amrit, the nectar of immorality, during churn the mount Mandara started to sink and tortoise form of Lord Vishnu put up with the weight of the Mandara Mountain. The third incarnation is in the form of a boar (Varahavatar) to defended mother earth with his tusks from demon Hiranyaksha and put back to its place in universe. In the fourth incarnation Lord Vishnu appeared into anthropomorphic or half man and half lion (Narsimhavatar) to end the demon Hiranyakashipu, as he was granted boon from Lord Brahma not to be killed by man, animal, inside or outside of abode, in the day or night, on ground or
sky, any weapon thus He appeared such to kill with the claws of a lion at the
courtyard threshold laying on his thighs. Fifth incarnation is of a dwarf
(Vamanavatar) were Lord Vishnu approached King Bali as an innocent boy and
asked for three paces of land. Bali agreed thinking how silly is the little boy’s
demand. To his surprise the dwarf turned to a giant and covered heaven in the first
stride, netherworld with the second stride, for the third stride Bali offered his head.
In the sixth incarnation Lord Vishnu appeared as a warrior with the axe
(Parashurama) born into a brahmin family but fought as a kshatriya against kshatriya
and made earth liberated from them for 21 times. The seventh incarnation was as an
ideal heroic man (Ramavatar). His legend recounted in the epic Ramayana that
includes 14 years of exile along with wife Sita and younger brother Laxman,
devotee Hanuman, Goddess Sita was abducted by the demon Ravana, Shri Rama
fought with Ravana to save Sita. Eighth incarnation of Lord Vishnu is as a yogi
(Krishnavavatar) were He appeared as a naughty butter eater boy, eternal love of
Radha, killed Kans, Geeta sayings to Arjuna. The ninth incarnation embodied peace
(Buddhavavatar) who preached non-violence, truth, compassion, good actions, and
right thoughts. The last tenth incarnation of Lord Vishnu is a destroyer of filth
(Kalkiavatar) on a white horse with a sword ready to demolish all unrighteousness
and sin at the end of Kali Yuga (Krishna, 2009; Holt, 2013; Gupt, 2015).

These Dashavatara have Navras (nine core emotions) they are Shringara,
Hasya, Bhibatsya, Rowdra, Shanta, Veera, Bhaya, Karuna and Adbhuta.

Shringara means love and beauty. This is the emotion that evokes love. This
is indeed the king of all emotions. Love can be between friends, mother and her
child, a teacher and his disciples and love for god. In Dashavatara Lord Krishna, the
eighth incarnation symbolizes love. Students are taught to express their love
emotions though facial expressions, specific gestures, postures of Shri Krishna and
Radhika’s eternal love, marriage of Lord Rama (seventh incarnation) and Goddess
Sita during intervention session. There are ample songs based on love emotions in
Indian Classical Music that are widely portrayed through beautiful melodies.
Hasya is the rasa used to express happiness, humor, laughter, joy or mirth. It is used to depict simple lightheartedness. Teasing and cheering with a friend, being amused, feeling carefree, frivolous and naughty all these are facets of humor. Where there is happiness, everything is well with the world. During intervention session students are guided to express their joy, an emotion portraying Lord Varaha, the second incarnation of Lord Vishnu as lord in tortoise form enjoys the protection of mount, students also sits knelled down with smiling face, sparking eyes, crows-feet wrinkles and enjoys the innocence, blissful appearance of Lord Vishnu. There is also a dramatic poses in the song showing butter thief naughtiness at Gokul by Lord Krishna (eighth incarnation).

Bhibatsya is disgust that is evoked by anything that makes queasy, revolts or sickens when the noticed action is against human dignity. It acts as a catalyst for fruitful overcomes. Students execute the pose of Lord Varaha (third incarnation) holding earth with tusks, few formations of disgraceful attitude of demons with God, wrinkled forehead and eye brows, eyes turned away, flared nose and twisted in sneer and chin jutting.

Raudra is anger emotion arises when things go against will and/or practiced in disharmony. The rage of Lord Narsimha (fourth incarnation) evoked by disrespect devotion and humanity of Bhakt Prahalad, the fury of gods by an offense of demon, the violent Seshnaag (snake) and other vigorous postures of violent dance of Lord Shiva (Raudra Tandav) with Eyebrows pulled down together, wide opened eyes, Upper eyelids raised in a stare, glairing eyes, wrinkled forehead, bloating nose, clenched teeth, Lips wide open to form a rectangle and tightly closed with the red margins of the lips becoming narrower, and the lips becoming thinner, jutting chin, clamping fist and stamping feet were executed, aesthetic representations during anger are sharp angles, loud sounds, discordant sounds an color red during dance intervention to experience and express suppressed anger in students.

Shanta is serenity, untroubled steadiness, tranquility and peace that is a state of calmness. It represents harmony between the mind, body and the universe. Shanta is the key to eternity. The poet Wordsworth came close with the phrase "strong
emotions recollected in tranquility” (Scheff, 2015). In Natyashastra, Bharata states that eight emotions are proposed by Lord Brahma (creator of world), and the ninth emotion, peace, is his contribution. Peace is felt when Buddha was enlightened and reached the spiritual consciousness that led to salvation away from the cycle of life and death. Students present the immobile pose of Lord Buddha (ninth incarnation) with closed eyes, dharmachakra mudra, dwipataka and tripataka hand postures.

Veera is courage, bravery, valiance, confidence and heroism. Bold attitude of martyrs during battle and the valor with which they die is a part of their heroism. Lord Parshurama (sixth incarnation) and Lord Rama (seventh incarnation) are characteristically the model for this emotion. Lord Parshurama dispelled Khatriyas 21 times from earth shows His bravery. Lord Rama, the hero of the Ramayan, publicized His courage while facing the ten-headed demon king Ravana. Students performs the postures of these gods with raised eye brows, tapping on thighs and shikhara mudra to express this emotion.

Bhaya is terror or fear. When well-being and safety is hampered feelings of helplessness arouse. Lord Kalki, tenth incarnation of Lord Vishnu being very powerful and bigger and a god of destruction for changing the era. The motive of this incarnation is to end up the negative to establish positive on earth. Thus this form of lord is a cause to cower in fear is innermost aspect to portray feeling of fear. This makes students release Dread, cowardice, agitation, discomposure, panic and timidty, features of fear through closed or eyes pointing down, raised eyebrows, mouth open and turned down, chin pulled in, head bowed down and pale face.

Karuna is pity. Feelings of sorrow, despair, anguish, sympathy, empathy, compassion, depressed, melancholy and distressed are the part of it. These feelings arise for beggar, children with motherhood, loss of a person, etc. In Dashavatar, Lord Vaman denotes this emotion for king Bali. Students’ expresses karuna with the standing pose of Lord Vaman, lord as a child in the laps and hands moving as a swing with gazed and damped eyes casting down, possibly tearful, eyebrows pulled down, wavering or pinched lips, wrinkled chin, and head tilted down or side.
Adbhuta is wonder that is never seen or imagined. The astonishment caused by seeing something powerful, unusual, remarkable beauty, magical, divine and supernatural (Kanneral, 2001). It is also a curiosity of man regarding the creation of the world and divine appearance of Lord Matsya (first incarnation) that surprises. The gigantic appearance of Lord Vishnu in the form of Matsya is executed with Matsya mudra, wide eyes; eyebrows rose up, widely opened mouth and head tilted to side or held back.

Dashavatara (Ten incarnations of Lord Vishnu) is a dance form that is dramatically enacted. It dramatizes the life stories of legendary devotees. These are depicted from the popular mythology in ‘Shrimadbhagvatpurana’ and extracted from the traditional ‘Vishnusahasranama’. The first Shankaracharya composed ‘Vishnushodasnama Stotra’ (chants of Lord Vishnu’s praises provided in appendix I), the sixteen significant names of Lord Vishnu (Rамamurthy, 2011; Gupt, 2015). This dance helps in releasing all the nine emotions (Navras) mentioned in the Indian classical dance such as love, sorrow, laughter, anger, disgust, fear, courage, wonder and peace. Music that is composed for Dashavatar dance typically soft, melodious and escalating that makes use of rhythmic patterns (talas) and melodies (ragas) that suit to the theme of the dance to transfer inner experiences. It gives completeness to the dance that allows the dancer to experience the full beauty and meaning of the lyrics and the movements portrayed. The music is soothing to the ears, peaceful for the mind activates the cortical systems connected with the circuits in the frontal lobes, creates an atmosphere for emotional enlightenment, introspection and bestows peace (Sharma, 2013). After the dance practice for three months (50 sessions) emotional competence of students is assessed.

Music turns into the supporting tool for own projection that provides energy and make dance livelier to express emotions. Musical instruments like Flute, Mridanga, Sitar, and Tabla are used to play music in Bharatnatyam and Kuchipudi dance forms. It is not mandatory to be expertise in dance to participate in this dance intervention program. The philosophy of dance and movement therapy is that “if you can dance in your heart, you can dance” (Hoban, 2000). Dances want music which drives their dancing effortlessly both physically and emotionally. Hence it is
important to choose music or lyrics which are primarily needed for the present study. This gives completeness to the dance that allows the students to experience and express emotions – love, hate, fear, anger as per the lyrics and the movements portrayed. The synergy between the music and dance is important in transmitting inner experiences. The word ‘raga’ is derived from the Sanskrit word ‘ranj’, literally means ‘to color that is shaded with emotions’. The medieval Sanskrit manuscript *Sangita-Darpanam* (The Mirror of Dance and Music) defines raga as a meticulous collection of sounds, notes and melodic movements appear like ornaments to enchant the mind (Arya, 2015). The blissful devotional songs help to express devotion, as a prayer to various gods and goddesses.

Hence 120 students who were randomly involved in the experimental group as per the above mentioned strategies need to sustain their interest in dance for 50 sessions and need to attend regularly without fail to obtain the authentic results for the research. Present research is based on the role of emotional catharsis through dance therapy in suppressed anger and emotional competence among school students, the lyrics selected for the intervention were *Raudra Tandav* (Shiva’s anger dance) and *Dashavatar* (Ten incarnations of Lord Vishnu). These dance forms are among the most renowned dance themes in all the Indian Classical Dances that has its own importance.

Researcher being trained in Indian Classical dance used her experience with dance training in deciding the time and duration for the effective intervention dance training. 50 intervention sessions (one hour each) were given to the students of experimental group (N=120) within three months to complete the training. Since, the extracurricular and group cultural activities are known to facilitate social skills (Brooks, 2013). This dance training was given in the big groups of students where special emphasis was laid on coordination of movements, synchronization with the actions of the other members of the dance group (photos enclosed of intervention). Since all the students were motivated to learn the dance, none of them dropped out from the dance session and it was a continuous training (six days per week) for three months except on Sundays, holidays and other causes.
Phase III-Post test

After the intervention of emotional catharsis through dance therapy for 50 sessions (each session of one hour duration) in tenure of three months, assessment of suppressed anger and emotional competence of experimental group (120 school students) and control group (120 school students) were prepared.

Inclusion-Exclusion criteria:

To caution the generalize ability, the researcher must specify Inclusion and exclusion criteria for participation in this study. Inclusion criteria are a set of predefined characteristics or attributes that are essential for the prospective subjects must have if they are to be included in the study, this decides the eligibility criteria used to rule in the target population for current research. Inclusion criteria should also respond to the scientific objective of the study specifically. Proper selection of inclusion criteria will optimize the external and internal validity of the study, improve its feasibility, lower its costs, minimize ethical concerns, good selection criteria will ensure the homogeneity of the sample population, reduce confounding, and increase the likelihood of finding a true association between the intervention and outcomes. While exclusion criteria are those characteristics that function that remove probable subjects from inclusion in the study (Timothy & Meline, 2006).

Table-3.3. Inclusion-Exclusion Criteria in the present study

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapeutic Intervention</td>
<td>Emotional Catharsis through Dance therapy</td>
<td>Emotional Catharsis through any other therapies</td>
</tr>
<tr>
<td>Age of subjects</td>
<td>Students of age range 13 to 16 yrs</td>
<td>Age less than 13 yrs and more than 16 yrs</td>
</tr>
<tr>
<td>Place of study</td>
<td>Registered same school students of class VII, VIII, IX, X</td>
<td>Not registered students, Passed out school Students, college students</td>
</tr>
<tr>
<td>Time Period</td>
<td>3 months (50 sessions, each session of one hour duration)</td>
<td>More than or less than 3 months</td>
</tr>
<tr>
<td>Samples</td>
<td>Randomly selected students who filled consent forms</td>
<td>Students who were not willing</td>
</tr>
</tbody>
</table>
Plan for Statistical analysis

Descriptive statistical analysis was used in the study to analyze the data obtained from 240 school students. Here frequency, percentage and mean were calculated to interpret the demographic characteristics of children.

Mean = $\text{Sum of the total scores/values}$

$N = \text{number of scores/values}$

In the inferential statistics, for testing the hypothesis of present study, paired sample $t$ test was computed. Paired sample ‘$t$’ test was used to compare mean between two groups, experimental and control group respectively. Paired sample ‘$t$’ test was used to compare the pretest and posttest mean scores of the dependent and independent variables (Garrette, 1989).

Paired ‘$t$’ test

$$t = \frac{\sum d}{\sqrt{\frac{n(\sum d^2) - (\sum d)^2}{n-1}}}$$

$t =$ paired ‘$t$’ test

$d =$ difference of pretest and post test score

$n =$ number of samples (school students)

Level of significance was set up as $p<0.05$.

Data were analyzed using SPSS version 19.
Table-3.4. Consolidated plan for the present study

<table>
<thead>
<tr>
<th>S. No</th>
<th>Hypothesis</th>
<th>Research design</th>
<th>Independent Variable</th>
<th>Dependent variable</th>
<th>Sample</th>
<th>Intervention technique</th>
<th>Data Collection tool</th>
<th>Statistics used</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>There will be no significant effect of emotional catharsis through dance therapy on suppressed anger among school students</td>
<td>Pre test post test experimental control group design</td>
<td>Emotional Catharsis through Dance therapy</td>
<td>Suppressed anger</td>
<td>120 School Students (Class VII, VIII, IX, X)</td>
<td>Raudra Tandav and Dashavatara dance themes in Bharatnatyam and Kuchipudi for 50 sessions, each session of one hour duration in tenure of three months</td>
<td>Anger Expression Scale for Children (AESC)</td>
<td>Paired sample ‘t’ test</td>
<td>0.05</td>
</tr>
<tr>
<td>2.</td>
<td>There will be no significant effect of Navras dance therapy on emotional competence among school students</td>
<td>Pre test post test experimental control group design</td>
<td>Emotional Catharsis through Dance therapy</td>
<td>Emotional competence</td>
<td>120 School Students (Class VII, VIII, IX, X)</td>
<td>Raudra Tandav and Dashavatara dance themes in Bharatnatyam and Kuchipudi for 50 sessions, each session of one hour duration in tenure of three months</td>
<td>Emotional Competencies Scale (EC)</td>
<td>Paired sample ‘t’ test</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Delimitations of the Study

Though, this study may provide some valuable data that could be used to enhance students through clinical intervention, nevertheless, limitations must be acknowledged. The main limitation of dance therapy is that it is not useful for those who are non-cooperative or detached from reality. It also becomes ineffective for those who lack in dance appreciation. Dance therapy would be also difficult to practice for them who hesitate to make body movements with the music or dance. This study is centered only on students of age range 12 to 16 yrs and intervention planned only for a time period of 50 sessions, and each session of one hour duration to see the effect of emotional catharsis through dance therapy on suppressed anger and emotional competence. The intervention for a long time and long term impact of Navras dance therapy on suppressed anger and emotional competence is not established.
DATA ANALYSIS & INTERPRETATION

The research methodology described in the previous chapter provided the baseline for the collected data, while this chapter represents the data analysis and its interpretation. The data, after collection, has to be processed and analyzed accordance with the outline lay down for the purpose of the time for developing the research plan. Data processing is essential for ensuring that researcher has all the relevant data for making contemplated comparisons and analysis.

Data processing implies editing, coding, classification and tabulation of gathered data so that they are amenable to analysis. The data may be enough, valid and reliable to any level but it does not serve any purpose unless it is systematically classified, carefully edited, tabulated, scientifically analyzed, intelligently interpreted and rationally concluded. Data analysis is done to make sense of the data collected so as to enable the researcher to present findings and draw specific conclusions to answer the research questions.

Numerous researches were done on emotional catharsis through different techniques at various groups but the gap identified in the reviews shown that it lacks the furnished information. Thus present study was undertaken primarily to understand the “Role of Emotional Catharsis through Dance Therapy in Suppressed Anger and Emotional Competence among School Students” as it is presented in a very specialized pool of research. This aims to obtain the objective of the study by critically analyzing the quantitative data.

It was advised to recognize the emotions to students during intervention dance therapy for a period of three months (50 sessions) in which they have eliminated negative emotions. When dance was practiced students were following the facial expressions, gestures, postures, movements. They have learned from those experiences hence action is the test of comprehension, action with knowledge that resulted in kinesthetic learning. Music provides support for the development of the special and necessary bond between children and their soul (Storr, 1992). Emotional Catharsis through dance gives an opportunity to release their hidden, repressed,
negative emotions in a constructive and artistic way. The emotions are released through physical activity without force and expressing through movements. Intervention program also supported school students with positive changes in their day to day life. Students have learned to express by identifying and regulating emotions. They have developed self confidence and self image. Students are more active than earlier. They developed their social interaction with better team work, sharing of views, leadership qualities and other presentation skills.

This study aims to obtain the objective of the study by critically analyzing the quantitative data. The results were eminently satisfying. Paired sample t-test was computed to prove the data statistically. The result extracted shows the significant effect of emotional catharsis through dance therapy in suppressed anger and emotional competence among school students. The experimental group (N=120) significantly decreased their level of suppressed anger and increased their level of emotional competence whereas controlled group (N=120) have no significant changes in their level of suppressed anger and emotional competence after intervention.

The results are organized as following:

- Assessment of suppressed anger and emotional competence before intervention (pre test) of school students in controlled group and experimental group
- Intervention through dance therapy for three months (50 sessions)
- Assessment of suppressed anger and emotional competence after intervention (post test) of school students in controlled group and experimental group

I. **Pretest analysis (before intervention)**

The level of suppressed anger and emotional competence was assessed as variables of the selected sample of school students before intervention of dance therapy. This gave the baseline data to compare the variables with the observation posttest.
A. Suppressed anger profile of school students in control group and experimental group

B. Emotional competence profile of school students in control group and experimental group

C. Gender differences on suppressed anger
   a. Gender differences of school students in control group
   b. Gender differences of school students in experimental group

D. Gender differences on emotional competence
   a. Gender differences of school students in control group
   b. Gender differences of school students in experimental group

Though the gender analysis is beyond the scope of this research, but since the sample comprised of girls and boys both, corollary analysis of gender distribution in suppressed anger and emotional competence level and dance therapy was performed to get greater insight.