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## Effect of cumbia dance on anxiety levels among teachers in Kerala

**Sujesh K and Dr. Razia Ki**

### Abstract

Teaching is a noble profession that commands a lot of respect in our society. Teachers contribute to the development of a more robust and healthy society by creating a conducive learning environment where students can thrive. But according to the nature of the teaching job, many of the physical and mental problems that they face make teachers vulnerable to serious health problems. This research puts forward and examines in detail that practicing the Latin dance, the Cumbia dance, produces an effective change in anxiety, which is one of the psychological problems among teachers. To realize the purpose of the study 40 women teachers were selected randomly as subject and out of which twenty teachers each in control and experimental group with an age ranged from 30-50 years. The experimental group had undergone Cumbia dance for 12 weeks 3 days in a week, whereas the control group normal daily routine activities. Tylor's manifest anxiety scale was used in the study. No significant difference was found between pre-test and post-test of control group ( $p < 0.05$ ) while significant difference was found between pre-test and post-test of experimental group ( $p < 0.05$ ). On the basis of result of this study it was concluded that Cumbia dance training was effective in reducing anxiety in teachers.

**Keywords:** Cumbia dance, anxiety, women teachers

### 1. Introduction

The rate of female labour force participation in India is on the rise. The latest periodic labour force survey (PLFS) 2021-22 shows that the labour force participation rate (LFPR) of women aged 15 years and above has increased significantly to 32.8% in India, from 23.3% in 2017-18. The LFPR of women in the age group of 15-59 years has increased from 25.3% in 2017-18 to 35.6% in 2021-22 (Employment & Directorate General of Employment, 2023) [7]. Work is the foundation of a better society. Work provides us with the essentials that allow us to live a good life- food, shelter, clothing, and medical care. Work is also the source of all wealth. But working condition, ranging from job demands to psychological experiences, may result in injury and illness, with subsequent long-term effects as a result of increased risk of chronic disease and mental outcomes. The research investigation has found that outdoor work has a negative impact on the health and well-being of working women, and psychological problems are widely found among them, which also affects their physical health (Shrivastava & Joshi, 2022) [21].

In India, the whole population in the adolescent and young adult age groups has a life time prevalence of stress and anxiety around 50 to 70% (Saddichha Sahoo Saddichha Sahoo, 2010) [19]. Globally, anxiety prevalence was found to be 10.6% in males and 16.6% in women, with a ratio suggesting that women experience anxiety at a rate roughly twice that of men (Manzoni *et al.*, 2008) [15]. It was discovered that among those who had worked longer, 10.0% of females and 8.2% of males experienced anxiety symptoms (H Andrea, U Bültmann, A Beurskens, GMH Swaen, CP Van Schayck, 2004) [9]. In the working population, the prevalence of stress was 3% for women and 13% for men. Among Indian working women, the prevalence of stress was found to be 37% and that of anxiety to be 40% (Patel *et al.*, 2017) [17]. The trend of educated women seeking lucrative jobs in offices, schools, colleges, etc., is growing. According to data from the Department of Education in India, more than 80% of all teachers in kindergarten through high school are women.

In teaching job teachers belong to the category of gift givers of knowledge but according to the nature of the teaching job, many of the physical and mental problems they face make teachers

vulnerable to serious health problems. From managing classrooms to grading papers, the responsibilities can lead to stress and anxiety, impacting the mental well-being of educators. Symptoms associated with anxiety such as rapid breathing or heart rate, lightheadedness or dizziness, abdominal pain, indigestion, chest pain, fatigue, Insomnia, headache etc. are commonly seen in working women. Also prolonged anxiety can adversely affect the cardiovascular, endocrine and central nervous system.

There are certain physiological and biochemical changes that occur in the body with response to anxiety. During periods of anxiety, a person's breathing may become rapid and shallow, which is called hyperventilation. Hyperventilation can make people feel like they are not getting enough oxygen, and they may gasp for breath. This can worsen hyperventilation. Long term anxiety may not be good for the cardiovascular system and heart health. Some studies trusted source suggests that anxiety increases the risk of heart diseases in otherwise healthy people. Due to long term anxiety may cortisol blocks processes that the body considers nonessential in a fight or flight situation. One of these blocked processes is digestion. Also, adrenaline reduces blood flow and relaxes the stomach muscles. As a result, a person with anxiety may experience nausea, diarrhea, and a feeling that the stomach is churning. They may also lose their appetite. Anxiety can also cause psychological symptoms including mental exhaustion, depression, and sleep difficulties, which can worsen anxiety and lower one's quality of life in addition to physiological and biochemical changes (Van der Klink *et al.*, 2001) [23]. Hence, it is necessary to quantify anxiety. Checklist, questionnaire and rating scales formats tools are commonly using to assessing anxiety levels.

Anxiety is treated with a variety of pharmacological and non-pharmacological methods. For pharmacological treatment, certain medications are typically used (Youngstedt & Kripke, 2007) [24]. Behavioural therapy, group therapy, progressive muscle relaxation technique (PMRT) (Kermane, 2016) [12], psychoanalytical therapy, and yoga are examples of non-pharmacological treatment (Shapiro *et al.*, 1998) [20]. In addition, there are art treatments like music therapy, dance therapy, painting, and sculpting (Koch & Morlinghaus, 2007) [13]. A study was conducted to determine how music interventions affected stress and anxiety, and the findings showed that these conditions may be effectively reduced by music interventions (Murcia *et al.*, 2009) [16]. Research has shown that music therapy helps reduce stress and anxiety, improve psychological health, relax physical and mental tension, and regulate dopamine and serotonin levels (Chanda & Levitin, 2013) [6]. There are many different dance forms, such as ballroom, street, jazz, ballet, cumbia, aerobic, and zumba, that can help lower anxiety and stress. As part of physical activity, Latin dance provides opportunities for people to participate in physical activities, express their emotions, socialize, and cope with daily stress, anxiety, and depression. Dance practices have reduced social physical anxiety (SPA) and due to its structure, dance is not only a physical activity but also a mental exercise (Adilogullari, 2014) [1].

Social Latin American dances include salsa, cumbia, bachata,

meringue, reggaeton, mambo etc. cumbia is a folk dance from Columbia. Cumbia dance is smooth, flowing movements with a focus on the hips. It is often danced in a circular motion and has a relaxed, easy-going feel. In cumbia dance the basic steps are relatively simple and repetitive, with a strong emphasis on the beat and a distinctive hip-swaying movement. Dance, with its social and creative aspects, can offer additional benefits. Latin dance, as a social dance form, has the potential to enhance social connectedness and improve mood. For instance, a 12 week Latin dance program was found to enhance mood and quality of life in older adults with mild cognitive impairment (Latinos *et al.*, 2017) [14]. While another study reported a reduction in symptoms of anxiety and depression in women with fibromyalgia following a 12-week Latine dance program (Adilogullari, 2014) [1]. Learning Latin dance can foster self-confidence, optimism, mutual understanding, and cooperation. Despite Latin dance being recognized as an effective form of exercise, limited research has investigated its impact on physical and mental health. Through a comprehensive examination of the existing literature, this review aims to provide a comprehensive assessment of the effects of Cumbia dance on anxiety of women teachers in Kerala.

## 2. Materials and Methods

### 2.1 Selection of subjects

The purpose of the study was to find out the effect of Cumbia dance on anxiety of teachers. For this purpose, forty (N=40) women teachers were selected from Thrissur District, Kerala in India. The subject's age ranged between 30 to 50 years. The selected subjects were divided into two groups of 20 subjects each namely experimental and control group. The experimental group underwent 12 weeks of Cumbia dance practices. The control group was not allowed to participate in any kind of treatment.

### 2.2 Selection of variable and test

All the subjects were tested on the Anxiety before and after 12 weeks of Cumbia dance training by using Tylor's manifest Anxiety scale test.

### 2.3 Training program

During the training period the experimental group underwent 12 weeks Cumbia dance program in addition to their daily routine activities as per the schedule. The duration of training were planned for 45- 55 minutes that is from 5.00 pm to 5.55 pm on Mondays, Wednesdays and Fridays. All the subjects involved in this study were carefully monitored throughout the training program; each session consists of warming up exercise followed by Cumbia dance training and finally cool down and stretching exercise for recovery purpose. After completion of 12 weeks of Cumbia dance training period, the participants were retested as the pre-test.

### 2.4 Statistical technique

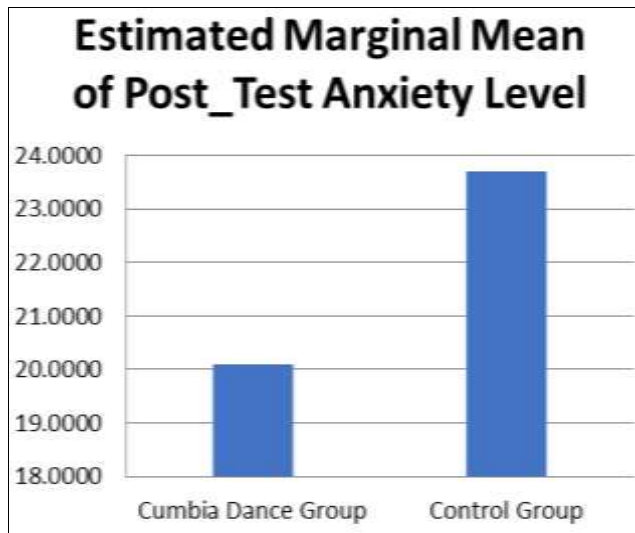
The data collected before and after the training period for both control and experiment groups on anxiety were statistically analysed by using an Analysis of Covariance (ANCOVA). The level of significance was fixed at 0.05.

### 3. Results

**Table 1:** ANCOVA Table for the Post-Treatment Data on Anxiety

Source	Type I sum of squares	df	Mean Square	F	Sig.	Partial Eta Squared
Anxiety_Pre	1373.889	1	1373.889	1415.984	.000	.975
Group	57.811	1	57.811	59.582	.000	.617
Error	35.900	37	.970			
Corrected Total	1467.600	39				

Table 1 illustrates the ANCOVA results for anxiety post-treatment. The analysis revealed that the aerobic dance intervention significantly affects the anxiety, with F- value of 59.582, which is significant at the 0.05 level. Additionally, the partial eta squared value of 0.617 indicates a large effect size.



**Fig 1:** Bar diagram depicting mean score of post-test anxiety level among teachers

The above figure illustrates a noticeable difference in post-test mean Anxiety between the Cumbia dance group and controlled groups, with the Cumbia dance group showing a lower mean Anxiety compared to the controlled group. A lower score on Tyler's Manifest Anxiety Scale indicates a better anxiety level. This visual representation further supports the findings presented in Table 1, highlighting the effectiveness of the Cumbia dance in reducing Anxiety level in the experimental group.

### 4. Discussion

It has been studied that aerobic dance therapy offers a way for an individual to defend against stress and anxiety by releasing endorphins and neurotransmitters that increases the feeling of wellbeing which can relieve the stress and anxiety and also it gives positive effects on both musculoskeletal and cardiovascular system and hence maintain good fitness (Aweto *et al.*, 2012) [3]. A study investigated effects of 12 weeks of dance intervention on psychiatric patients with stress and depression they found out that significantly less depression in subjects who participated in dance group than the subjects in music therapy session (Koch & Morlinghaus, 2007) [13].

Dance, with its social and creative aspects, can offer additional benefits. Latin dance, as a social dance form, has the potential to enhance social connectedness and improve mood. For instance, a 12-week Latin dance program was found to enhance mood and quality of life in older adults with mild cognitive impairment (Latinos *et al.*, 2017) [14], while

another study reported a reduction in symptoms of anxiety and depression in women with fibromyalgia following a 12-week Latin dance program (Adilogullari, 2014) [1]. Similarly, we set up and trained the Cumbia dance program for 12 weeks to test whether the cumbia dance program is effective in reducing the anxiety of women teachers. Subsequent statistics in the study found that there was a significant difference between the pre-test and post-test of women teachers' anxiety. So, this study evaluated that Cumbia dance has a positive effect on the anxiety of the teachers.

### 5. Conclusions

On the basis of the results of this study, it was concluded that Cumbia dance program was significantly effective in reducing anxiety in women teachers. And it has highly positive impact in management of anxiety related problems because as a part of physical activity, dancing provides people opportunities to participate in physical activity as well as expressing their emotions, socializing, and coping with daily stress, anxiety and depression. Because its structure, Cumbia dancing is not only a physical activity, it is also a psychological exercise.

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