



## RESEARCH ARTICLE

### EFFECTS OF ZUMBA DANCE ON THE MANAGEMENT OF STRESS - A SURVEY

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#### ABSTRACT

**Aim:** To study the effects of Zumba dance in the management of stress.

**Background:** Stress is a part of daily living and it can be considered as a natural human phenomenon. Basically, stress refers to the feeling of being under unbearable mental and emotional pressure. It may affect an individual's feelings, thoughts, behaviour, and physiology. Stress can be caused by various life's demands, which include work, academic, relationships and financial. Different people have different ways of dealing with stress, depending on the individual. Zumba dance is a form of cardiovascular exercise that helps in improving mood and the energy level of an individual through the secretion of hormones that induce stress relief such as norepinephrine, serotonin and dopamine. Zumba dance involves various active movements and exercises, which can stimulate the production of endorphins in the body in order to suppress the action of stress-causing hormones such as cortisol and adrenaline.

##### Materials and Method:

- 1) A group of 50 individuals are randomly selected as the sample subjects.
- 2) Each individual is given a survey form to be completed within 30 minutes.
- 3) After a month, the same survey form is given again to each individual to be completed within 30 minutes.
- 4) The survey forms of an individual given before and after the Zumba dance classes are compared.
- 5) The difference between the two survey forms is recorded to study the effects of Zumba dance in the management of stress.

**Result:** Difference between the first and second survey forms given to an individual indicates the effects of Zumba dance in the individual's stress management.

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## INTRODUCTION

Dance provides various benefits for the body and mind. It is a great way for dealing with stress. According to the American Dance Therapy Association (ADTA), dance or movement therapy involves numerous movements, which can improve the emotional, cognitive, physical and social integration of an individual. (Neil Johnson, 2016) Dance therapy helps to boost self-expression in individuals with physiological disorders. Zumba is a dance therapy that involves the fusion of Latin rhythms and various easy-to-follow movements with different kind of styles, including salsa, merengue, mambo, rumba, cumbia, reggaeton, hip hop and flamenco. (Konrad, 2011) In the course of Zumba dance, interval-training sessions are carried out with a mixture of fast and low rhythms combined with resistance training. Stress is a reaction to any stimulus that can alter an individual's physical and mental balance. It can be stimulated by the benign stress that an individual

experiences on a daily basis such as getting scolded or being late for class or chronic stress which is prolonged for a period of time. Stress stimulates the adrenal glands to secrete a stress hormone called cortisol. A small amount of cortisol in the body helps in maintaining a normal blood pressure, improve the memory functions and increase one's energy. (Neil Johnson, 2016) However, a high level of cortisol may lead to various problems such as high blood pressure and damaged cognitive functions.

## MATERIALS AND METHODS

The study was done as a questionnaire-based study among the members of a Zumba class at Pink Fitness Centre. A total of 50 participants were involved in the survey. All the participants were provided with a list of 20 questions before and after attending the Zumba classes. The participants were told to choose only one answer that describes them the most. Each participant completed the stress test in approximately 4 to 5 minutes. Below is the list of questions given to the participants who took part in the survey.

**Survey form on the effects of Zumba dance in the management of stress**

Participant's NO.: \_\_\_\_\_

Gender: \_\_\_\_\_

All questions in this survey are related to your thoughts, feelings, perceptions and behavior. Circle a number in each question to represent yourself during the last month. Use the following guidelines to answer the questions.

- 1 – Never
- 2 – Almost never
- 3 – Sometimes (Once or twice each week)
- 4 – Fairly often (Four or four times each week)
- 5 – Always (Almost everyday)

1. I felt stressed over the things that happened in my life.  
1            2            3            4            5
2. I felt gloomy or exhausted when I woke up in the morning.  
1            2            3            4            5
3. I felt angry over things that did not happen the way that I wanted them to be.  
1            2            3            4            5
4. I felt concerned over other's opinions about myself.  
1            2            3            4            5
5. I thought about giving up on something, which I have started.  
1            2            3            4            5
6. I felt happy and joyful in doing something.  
1            2            3            4            5
7. I expressed openly about my feelings: nervous, angry, etc.  
1            2            3            4            5
8. I felt worried about my health that I could not focus on other things.  
1            2            3            4            5
9. I felt too tired or restless that I had no mood in doing other things.  
1            2            3            4            5
10. I could not calm myself down or relax.  
1            2            3            4            5
11. I lost my patience and became irritable easily.  
1            2            3            4            5
12. I experienced the symptoms of stress such as headaches and nausea.  
1            2            3            4            5
13. I forgot about deadlines, appointments, etc.  
1            2            3            4            5
14. I worried about the next day before going to sleep.  
1            2            3            4            5

15. I could not concentrate on something as I kept thinking of other things.  
1            2            3            4            5
16. I ate a lot as an attempt to relax or relieve tension.  
1            2            3            4            5
17. I could not sleep well because I thought about a lot of things.  
1            2            3            4            5
18. I drove over the speed limit without realizing.  
1            2            3            4            5
19. I interrupted people while they were talking.  
1            2            3            4            5
20. I could not finish my work in time due to procrastination.  
1            2            3            4            5

Total score: \_\_\_\_\_

Evaluate your total score according to the following criteria:

POTENTIAL LEVEL OF STRESS:

- LOW 40 OR LOWER ( $\leq 40$ )
- MODERATE 31 – 48
- HIGH 49 – 56
- VERY HIGH 57 OR HIGHER ( $\geq 57$ )

**RESULTS**

Participant's No.	Total Scores	
	Before	After
1.	61	37
2.	66	63
3.	59	31
4.	65	40
5.	52	31
6.	59	38
7.	86	27
8.	64	41
9.	47	34
10.	76	67
11.	86	44
12.	77	42
13.	72	38
14.	82	50
15.	74	48
16.	59	34
17.	68	67
18.	58	60
19.	45	37
20.	54	34
21.	84	40
22.	81	37
23.	77	45
24.	80	43
25.	83	40
26.	78	34
27.	84	38
28.	76	39
29.	85	42
30.	81	32
31.	51	38
32.	72	37
33.	83	42
34.	86	37
35.	83	45
36.	83	37
37.	82	36

38.	90	40
39.	88	38
40.	75	35
41.	74	37
42.	85	81
43.	68	52
44.	72	37
45.	82	36
46.	83	47
47.	85	49
48.	84	42
49.	65	49
50.	84	31

**Potential Level of Stress (BEFORE practicing Zumba dance)**

Stress Level	Score	Number of Participants
Low	40 or lower (< 40)	0
Moderate	41- 48	2
High	49 – 56	3
Very High	57 or higher (> 57)	45

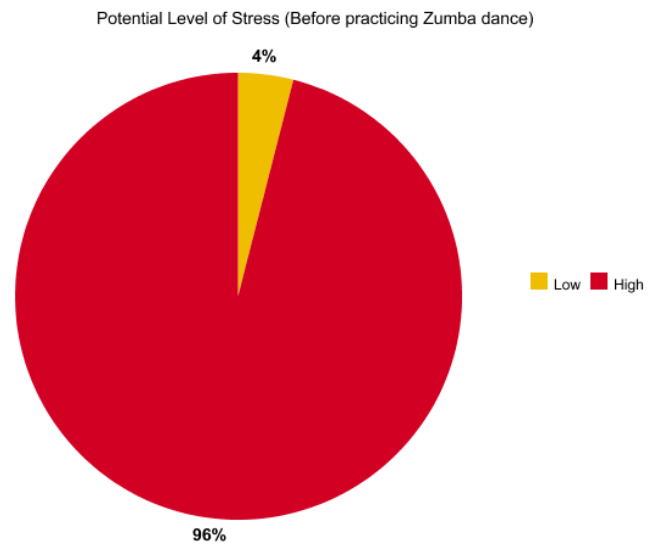
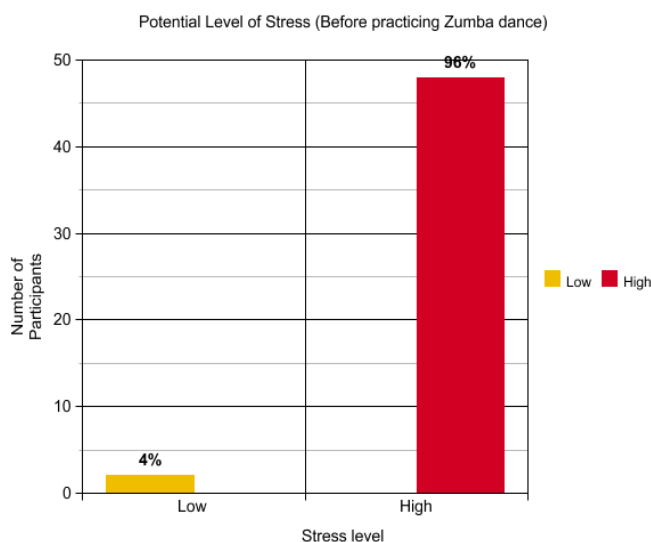
**Potential Level of Stress (AFTER practicing Zumba dance)**

Stress Level	Score	Number of Participants
Low	40 or lower (< 40)	30
Moderate	41- 48	11
High	49 – 56	4
Very High	57 or higher (> 57)	5

Participants who scored 40 or lower and in the range of 41 to 48 do not undergo a high level of stress, while participants who scored in the range of 49 to 56 and 57 or higher may be undergoing or at the risk of developing a high level of stress. Hence, participants with a stress level of either low or moderate are categorized together under “Low stress level”, while participants with a stress level of either high or very high are grouped together under “High stress level”.

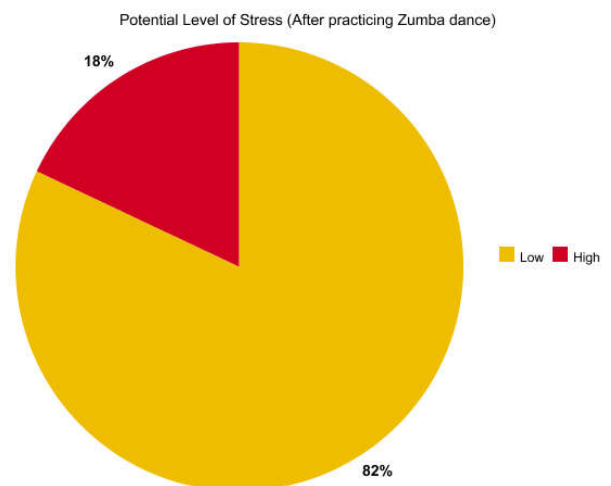
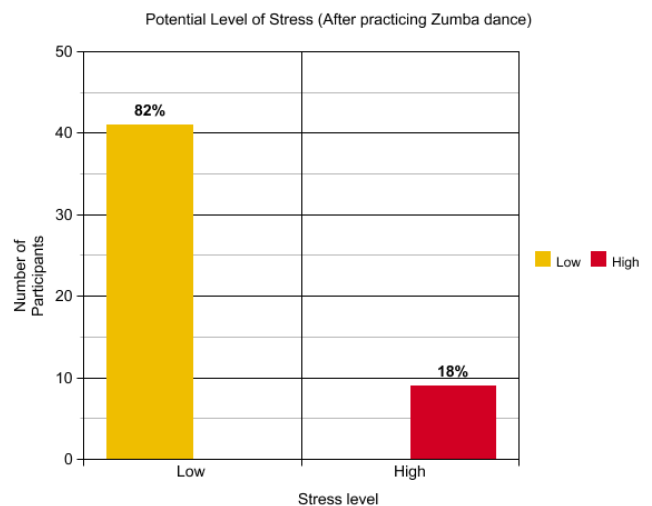
**Potential Level of Stress (BEFORE practicing Zumba dance)**

Stress Level	Total Number of Participants	Percentage of Participants (%)
Low	0 + 2 = 2	4
High	3 + 45 = 48	96



**Potential Level of Stress (AFTER practicing Zumba dance)**

Stress Level	Total Number of Participants	Percentage of Participants (%)
Low	30 + 11 = 41	82
High	4 + 5 = 9	18



**DISCUSSION**

The study involved 50 participants who attended Zumba classes at Pink Fitness Centre to analyze their potential level of

stress before and after practicing Zumba dance and determine the effects of Zumba dance on the management of stress.

### Before practicing Zumba dance

According to the result, a total of 48 participants show a high level stress while the remaining 2 participants indicate a low level of stress. 96% of the total number of participants who attended the Zumba classes represents the larger group with a high level of stress while the smaller group with a low level of stress is represented by 4%. The highest score recorded in the stress test was 90 by participant number 38 and the lowest score was obtained by participant number 19 with a value of 45. Therefore, the number of participants who undergo a high level of stress is higher than the number of participants with a low level of stress before the Zumba practice.

### After practicing Zumba dance

According to the result, a total of 41 participants show a low level of stress while the remaining 9 participants indicate a high level of stress. 82% of the total number of participants who attended the Zumba classes represents the larger group with a low level of stress while the smaller group with a high level of stress is represented by 18%. The highest score recorded in the stress test was 81 by participant number 42 and the lowest score was obtained by participant number 7 with a value of 27. Therefore, the number of participants who undergo a low level of stress is higher than the number of participants with a high level of stress after the Zumba practice. From the result, it can be seen that all the participants show a decrease in their level of stress after attending the Zumba classes for one month. Some participants such as participant number 2 and 17 show only a slight decrease in their stress level, while others show a rapid decrease in their level of stress as seen in participant number 7 and 38. This proves that Zumba has a positive effect on an individual's stress management by lowering the potential level of stress.

### Effects of Zumba dance on stress

Zumba is considered as a great cardiovascular exercise that helps in strengthening the heart and muscles to allow more oxygen to be transported throughout the body effectively and it provides higher lung efficiency. Moreover, the movements involved in Zumba ensure normal heart rates by lowering the blood pressure. (Daas, 2013) Zumba also helps in stimulating the secretion of certain hormones such as norepinephrine, serotonin and dopamine required to improve mood and increase the energy levels, which can overcome stress. (Neil Johnson, 2016) Furthermore, the active movements involved in Zumba stimulate the release of hormone endorphins to suppress the action of stress-causing hormones such as cortisol and adrenaline. (ZUMBA Fitness for Stress Relief: It's for Everyone! 2014) This improves an individual's mood and

feelings. Zumba facilitates in stress relief both internally and externally by providing a way for an individual to deal with any condition that may lead to stress. It makes a person feels energized and full of spirits to start the day. All the movements involved in Zumba help in overcoming the stress of weight gain as they allow an individual to lose weight and become fit at the same time by burning up to 1000 calories in one hour. Zumba is also an excellent way to improve one's confidence by loosening the body and nerves. (Top 10 Health Benefits of Zumba, 2015) With all these points, it is proven that Zumba is the best form of exercise to boost energy and relax the body and mind from all negative energy that can cause stress. (Corina Dondas 2013)

### Conclusion

In today's society, stress is considered to be a normal thing in most individuals. We experience stress almost everyday in our lives. Be it the deadlines, rush hour traffic or even our family and friends. All these things contribute to the increase in our stress level. Stress is harmful to the body, in which it constantly keeps our body in a "fight-or-flight" mode and prevents the body from resting or healing. Hence, it is very important for us to know the right way to manage the stress in our lives. Regular exercise is the best way to relieve our stress as it helps to reduce the stress level and enhance our health, confidence, productivity and focus. Zumba is a good form of regular exercise, which provides us with the necessary endorphin rush and reduce our stress level and anxiety. It can be done by every individual, regardless of their age, genders and body sizes. Zumba allows stress relief internally and helps us to deal with the things that lead to the increase in our stress level. Zumba is indeed the best way to manage our stress, which in turn helps to improve our overall health and well being.

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