



# Group Exercise to Decrease Anxiety in African American Women

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## Introduction

- In the 1990s the burden of anxiety disorders in the United States was estimated at 42.3 billion dollars annually.
- Women are twice as likely as men to experience anxiety disorders and African American (AA) women may experience more anxiety disorders than their white counterparts.
- African American women are historically reluctant to receive medication and psychotherapy as treatment for anxiety, therefore alternatives to decrease anxiety may prove to be a viable choice. populations.

## Purpose

- The purpose of this proposed Doctorate of Nursing Practice (DNP) capstone project is to examine the effects of exercise on African American women with anxiety.
- This study proposes to determine if exercise is an effective or alternative treatment to medication and psychotherapy for African American women anxiety.



## Sample and Methods

- The study site is Liberty Grace Church of God, an African-American church in Baltimore, Maryland that was large enough to conduct a group exercise intervention for anxiety.
- The sample size comprised 31-47 participants that met study requirements of being African American women age 21 and over that have scored 24 or above on the Zung SAS
- This research project used a pre experimental design with one group of participants compared at two different intervals
- After initial measurement an intervention of a instructor-led group exercise was done for 50 minutes, twice weekly, concurrently over a four-week period, with everyone having the exact same exercise routine.

- Participants were recruited through community churches, craigslist, fitness recruiter, community shopping centers, beauty salons and word of mouth.

### Zung Self-Rating Anxiety Scale (SAS)

- The Zung SAS has 20 questions that measures perceptions of anxiety based on somatic symptoms. Scores are totaled numbering 20-80. The scores are totaled and indexed from 20-80.
- The questions are based on subjective somatizations based on physiological systems including; integumentary, gastrointestinal, muscular skeletal, cardiovascular, and respiratory.
- The anxiety levels scores rank from 1-4. 'little or none of the time' (scored as 1), to "Most or all of the time" (scored as 4) (Olatunji, Deacon, Abramowitz, and Tolin, 2006).

## Results/Conclusions

### Raw Index

- Fifty-six AA females signed up for the class, 47 attended the initial first class and due to attrition, 31 persons completed the entire study. (n=31)
- A paired t-test was used to determine differences in raw index anxiety scores from the Zung SAS pre group exercise and post group exercise.
- Comparison of Zung Raw Index Scores for pre and post anxiety levels resulted in both groups being categorized in the same anxiety level.
- Therefore it can be concluded that the group exercise class did not significantly decrease anxiety (Table 1)

Table 1

	Mean	N	Std Dev	Std Mean Err
Pre Group Exercise Score	1.2	31	0.40	0.7
Post Group Exercise Score	1.1	31	0.30	0.5
P value .535				

### Raw Totals

- Using a paired t-test Zung raw totals indicating anxiety levels were computed before and after the group exercise intervention. Averages of raw totals were lower in the post group exercise sample. (n=31, 31%)
- Since the Zung Raw Index Scale has broad ranges for anxiety levels lower total scores this did not lower the level of anxiety. (Table 2)

Table 2

	Mean	N	Std dev	Std Mean Err
Pre Exercise	35.2	31	7.0	1.2
Post Exercise	31.0	31	7.5	1.3
P value .015				

## Implications

- This study evaluated African American females with anxiety before and after a group exercise intervention considered as a alternative to traditional treatment for anxiety.
- Knowledge of alternative methods to decrease anxiety may reduce problematic anxiety levels in this population and improve overall mental health.
- By examining outcomes from this study practitioners can be better prepared design methods of treatment that are culturally appropriate for this population and overcome obstacles that prevent treatment.
- As a DNP prepared PMHNP it is important to understand behaviors of humans and the relationship to their environment. This understanding is important for obtaining optimal results in functioning and wellness (AACN, 2006).

## References

- American Nurse Credentialing Center (2012) psychiatric mental health nurse practitioner role delineation study national survey results. Retrieved from <http://www.nursecredentialing.org/Certification/NurseSpecialties/FamilyPsychMentalHealthNP/RELATEDLINKS/FamilyPsychNP-2011RDS.pdf>
- Olatunji, B.O., Deacon, B. J., Abramowitz, J.S., and Tolin, T. F. (2006) Dimensionality of somatic complaints: Factor structure and .doi:10.1016/j.janxdis.2005.08.002