The Relationship Between Exercise and Stress Level among Youth Care Employees

A graduate project submitted in partial fulfillment of the requirements

For the degree of Master of Social Work

By

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in collaboration with Anthony Pinedo

December 2016
The graduate project of Anastasia Moskalenko is approved:

Dr. Allen Lipscomb

Date

Dr. Jodi Brown

Date

Dr. Amy Levin, Chair

Date

California State University, Northridge
Dedication

The reason why researchers chose this study is because there was a high turnover rate at the Casa Pacifica Agency. Researcher had a conversation with the agency’s supervisor regarding this matter. Supervisor followed up with the researcher in two weeks after the conversation and asked a researcher whether this study could be performed. Thank you to all subjects that participated in this study, for you have helped raise awareness regarding the positive relationship between exercise and stress levels among youth care workers.
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Abstract

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By

Anastasia Moskalenko

Master of Social Work

Casa Pacifica provides hope and help for abused and/or neglected children. Working with this population is often very rewarding because employees of the agency work extremely hard to help youth and to make a positive impact for their futures. On the other hand, this job demands a lot of energy and dedication. Many employees are unable to handle stress appropriately. Thus, high turnover rates are common, which makes it very difficult for employees to stay consistent and to successfully serve this population.
Introduction

The agency, Casa Pacifica is composed of compassionate individuals who invest their time and energy in the youth that that serve on a daily basis. While providing hope and help to these youth and their families, these employees routinely demonstrate tremendous courage, respect, compassion, and integrity and, in turn, it is easy to suffer from burnout. The problem to be studied is the implementation of physical activity/exercise lowering stress levels among these youth care workers.
Purpose of Study

The purpose of this research study is to examine whether exercise plays a role in decreasing the stress levels among youth care workers at Casa Pacifica. For this study, researchers collected their own data, not the agency’s data, from the employees at the agency, Casa Pacifica. This study dissected the relationship between physical activities/exercise and levels of stress among agency employees. The objective of this study was to explore whether or not exercise plays a role in decreasing the stress levels among these youth care professionals. According to the previous research, no significant changes were found between variables such as psychological health being of the employees, physical exercise and job satisfaction (Roessler, Rugulies, Bilberg, Andersen, Zebis, et al., 2013). Another study indicates that little has been known about relationship between physical activity and stress reduction. Also, these findings indicate that different level of physical activity can differently affect individual’s body due to subject’s different stress level at the moment. (Rimmele, Seiler, Marti, Wirtz, Ehlert, et al., 2009). Researchers will conduct a quantitative study at the agency of Casa Pacifica.

The research question is whether exercise/physical activity reduce levels of stress among youth care workers?

This study has potential to create advocacy efforts from other social workers exposed to this information. The researchers anticipate to find a decrease in stress levels in youth care workers that participate in this study. In support of the stated hypothesis literature hasn’t found much research stating that when youth care workers take part physical fitness three times per week for at least thirty minutes per week, that they will
experience a decrease in the level of stress. This project can potentially help to decrease the agency’s turnover rate, if physical fitness is introduced and implemented in the daily lives of youth care workers at this agency.


**Literature Review**

When researchers tried to obtain more information on a particular topic, it appeared that there was a lack of research being done on this particular subject. To highlight the important variables in the study, students did the literature review online to understand whether similar studies had been done previously by other researchers. According to one of the studies, physical activity showed positive associations with good work ability and healthy and productive lifestyle. Aerobic exercise appears to affect a stress level and improve individual’s capacity for stress coping. “This finding may indicate that the higher aerobic fitness alleviates muscle tension during work, exerting a positive buffering effect on stress, and thus may reduce musculoskeletal problems, such as tight muscles”. According to the study, the higher physical fitness seem to lower muscle tension” (Ritvanen, T., Louhevaara, V., Helin, P., Halonen, T., & Hänninen, O., et. al 2007).

“The purpose of this study was to investigate how physical activity (PA), cardiorespiratory fitness (CRF), and body composition are associated with heart rate variability (HRV)-based indicators of stress and recovery on workdays”. Results showed that physical activity, cardiorespiratory fitness, and body structure were meaningfully related with levels of stress and recovery on workdays. (Teisala, T., Mutikainen, S., Tolvanen, A., Rottensteiner, M., Leskinen, T., et al. 2014).

Another study found that physical fitness is directly related to both psychological and physical distress (Ensel, W., & Lin, N., et. al 2004). This leads to the conclusion that researchers from Casa Pacifica may come up with same results after they will collect the data and analyze it.
Most of the times, exercise and stress research has focused on aerobic exercise. There have been findings, which concluded that people report feeling calmer after a 20-to 30-minute of aerobic exercise, and this effect can last for several hours after exercise has been performed. According to the study, there is limited research on the role of resistance exercise in stress management (Jackson, E., et. al 2013). Researchers from Casa Pacifica will ask participants to exercise at least 30 minutes a day, 3 times a week. At the end of the study, researchers will examine the results and plug the result into SPSS program to see whether correlation between exercise and stress at the work field exists.

**Strengths and Deficits**

Particular studies are time consuming for participants. Participants had to keep up with physical activity in order for researchers to measure or obtain the results. Another fact is that the research on this subject is limited. There is not a lot of evidence that supports students’ study.

Particular studies are harmless to the participants. Moreover, participants may benefit from the studies. Being able to keep an active life style may improve individuals’ well-being.

**Hypothesis**

The hypothesis is that physical activity/exercise will lower stress levels among these youth care workers
Methods

Potential Subjects were Informed and presented with an overview/ description of this study during a Casa Pacifica All staff meeting. This short orientation was taking place one week prior to the distribution of the surveys and last 15-20 minutes. The discussion laded by the researcher’s supervisor. Researcher’s supervisor also explained that in order to ensure anonymity, that he was not going to be present the following week for the distribution of the surveys and, In fact, the researcher’s supervisor was distributing and collecting the surveys for both the pre-test and post-test. Researcher’s supervisor informed all employees that, if they are not willing to participate in the research, word searches would be provided to pass the time while their colleagues are completing their surveys. All participants were informed that the final results/ findings for this study will be available for them to access upon completion of the entire project, for those that wish to have that information prior destroying the data , both computer and surveys.

The researcher's supervisor distributed the surveys and word searches. Researcher were not present during this time. This process took 10-15 minutes. When it was completed, the researcher's supervisor instructed all participants to drop the completed surveys into the sealed drop box that was easily accessible, positioned by the exit door. Researcher's supervisor informed the employees that chose to do the word searches, to not drop then in the drop box but instead to take it with them or dispose of them after exiting the room. There was no compensation awarded to those that participate in the study.
The study population consisted of male and female youth care workers twenty one and above who work at the agency, Casa Pacifica. The projected number of subjects are between fifty and seventy subjects. The inclusion criteria includes members of the Casa Pacifica youth care worker team who are twenty one years and above who work with these youth forty or more hours per week. The researchers used their own data collected through questionnaires that was distributed by the researcher’s supervisor. The researchers were not coming into contact with the population studied.

Own data was used so recruitment is necessary. Recruitment was composed of the employees at the agency, Casa Pacifica that range from the ages of twenty one years and above. There was no deception involved and no consent needed. Own data was obtained from the employees at the agency of Casa Pacifica, through questionnaires.

The researchers was using their own data collected through questionnaires that was distributed by the researcher’s supervisor during the agency’s staff meetings. The researchers were not coming into contact with the population studied. This is the best way to collect the data due to the fact that employees from the agency have to go to the agency’s meetings which are mandatory. It is convenient for an agency’s supervisor to explain the guidance and to follow through with researcher. Subjects were Informed and presented with an overview/ description of this study during a Casa Pacifica.

In this particular study, there is a minimum potential risk in terms of ethics. A staff member from the agency anonymously collected data for researchers through surveys from the employees at Casa Pacifica. Participants’ information will remain anonymous. The researchers were not having access to the names and corresponding numbers given to each subject. Researchers were not having access to the subject’s pre
and post-test assessment. The subject’s pre and post-test assessments was stored in a locked compartment with only researcher’s access to by key. However, risk due to injury resulting from the physical activity desired, can be prevented by properly stretching prior to the exercise performed by the participants. Moreover, potential injury suffered during any physical activity will be the participant’s responsibility for care.

The researchers did not have access to any identifiable information and did not have access to each subject’s given number. Agency employees matched the pre and post-test assessments with the subject’s given number. Researchers were informed when the collection of the surveys is completed. Once the room is free from all subjects who participated in the study, the researcher entered the room to collect the surveys from the drop box. The following step would be for the researcher to collaborate with the other researcher to successfully input the data in the SPSS.

The independent variable is stress levels and the dependent variable is physical activity/exercise, in which we proposed that physical activity/exercise decreased stress levels among youth care workers. The study variables included stress levels and physical activity/exercise. Stress levels are measured by the Measuring Stress Levels Questionnaire. Physical activity/exercise are measured by participants reporting how they feel after taking part in the physical activity.
Data Analysis

Researchers analyzed data using three types of statistical tests. Researchers utilized a frequencies analysis to determine the percentage of males vs. females in the sample, a descriptive analysis to determine the mean age of the sample, and a one-sample t-test to measure the impact that exercise had on participants’ stress level. Researchers also used an independent sample t-test to determine the impact that exercise had on participants stress level by gender.

The sample consisted of 17 males and 13 females. According to the frequencies analysis, males made up 56.7% of the sample, while females made up 43.3%. The descriptive analysis found that the average age of the participants in the sample was 27, with a minimum age of 21 and a maximum age of 44.

The study took place over the course of three weeks. Stress levels were measured prior to the implementation of an exercise regimen, and stress levels were measured again after three weeks of exercise. The results showed a decline in stress levels amongst the participants. Over the three week intervention, participants’ stress level significantly reduced from pre-test ($M = 23.9, SD = 2.98$) to post-test ($M = 21.3, SD = 2.68$). There was a larger reduction in stress levels among the male participants from pre-test ($M = 23.47, SD = 3.42$) to post-test ($M = 20.58, SD = 2.89$), than there was among the female participants from pre-test ($M = 24.46, SD = 2.29$) to post-test ($M = 22.23, SD = 2.12$). Thus, researchers concluded that the intervention was successful in reducing stress levels among youth care workers at Casa Pacifica, a residential facility/emergency shelter for at-risk youth. This was especially true for male youth care workers.
The significant reduction in stress levels across the study population demonstrates the positive impact that exercise had on the sample. The researchers’ data thus supports the hypothesis that exercise decreases stress levels among youth care workers at Casa Pacifica.


**Discussion**

The Researcher's supervisor distributed the surveys and word searches on January, 2016. Researcher were not present during this time. This process took approximately 10-15 minutes. The researcher's supervisor instructed all participants to drop the completed surveys into the sealed drop box that was easily accessible, positioned by the exit door. Researcher's supervisor informed the employees that chose to do the word searches, to not drop then in the drop box but instead to take it with them or dispose of them after exiting the room. There was no compensation awarded to those that participate in the study.

The study population consisted of male and female youth care workers twenty-one and above who work at the agency, Casa Pacifica. There were 37 subjects. The inclusion criteria included members of the Casa Pacifica youth care worker team who are twenty-one years and above who work with these youth forty or more hours per week. The researchers were using their own data collected through questionnaires that were distributed by the researcher’s supervisor. The researchers were not coming into contact with the population studied.

The researchers did not have an access to any identifiable information and they only had an access to each subject’s given number. Agency employees matched the pre and post- test assessments with the subject’s given number. Researchers were informed when the collection of the surveys was completed.
Conclusion

The study found that exercise does play a crucial role in lower stress levels among youth care workers at the agency, Casa Pacifica. Results from the study suggest that the direct-care staff employed in residential settings average higher levels of stress without the implementation of a minimum of 30 minutes of exercise at least 4 times per week, and lower levels of stress among the staff that do implement this regimen weekly.
References


Appendix A: Tables

T test

One-Sample Statistics

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One-Sample Test

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FREQUENCY
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Appendix B: Stress/Exercise Survey

Measuring stress levels at the workplace

Date:
Gender:
Age:
Job title:

This scale is a stress assessment instrument. The questions in this scale gages stress level encountered at your work place. This survey will explore your feelings and thoughts about the work that you have done for the past two weeks. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you are encouraged to treat each one as a separate question. The best approach is to answer fairly quickly. That is, don't try to count up the number of times you felt a particular way; rather indicate the alternative that seems like a reasonable estimate. You will be given the same survey twice. This is a Pre-test survey. Post-Test survey will be given to you in two weeks from today's date to measure your stress level and if physical exercise that you will perform throughout the study for 30 minutes, 3 times a week help you to decrease your stress levels at your work. Please, feel free to take a pre-test and post-test if you really want to participate in the study. Participating in the study is not mandatory and you can withdraw at any time without informing researchers or researcher’s supervisor.

Note*: Try to take notes after you performed exercise: your feelings, emotions and your physical reaction to it.

For each question choose from the following alternatives: Pre-Test Survey

0-never 1-almost never 2-sometimes 3-fairly often 4-very often

1) ___ In the last two weeks, how often have you been upset because of something that happened unexpectedly at work?
2) ___ In the last two weeks, how often have you felt that you were unable to control the important things at your work?
3) ___ In the last two weeks, how often have you felt nervous and stressed at work?
4) ___ In the last two weeks, how often have you felt confident about your ability to handle your problems at work?
5) ____ In the last two weeks, how often have you felt things were going your way at work?
6) ____ In the last two weeks, how often you found that you would not cope will all the things that you had to do at work?
7) ____ In the last two weeks, how often have you been able to control irritations at your work?
8) ____ In the last two weeks, how often have you felt that you were on top of things at your work?
9) ____ In the last two weeks, how often have you been angered because of things that happened that were outside of your control at your work?
10) ____ In the last two weeks, how often have you felt difficulties were piling up so high that you could not overcome them at your work?

Measuring stress levels at the workplace

Date:
Gender:
Age:
Job title:

This scale is a stress assessment instrument. The questions in this scale gages stress level encountered at your work place. In each case, you will be asked to indicate how often you felt or thought a certain way after taking part in physical exercise. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer fairly quickly. That is, don't try to count up the number of times you felt a particular way; rather indicate the alternative that seems like a reasonable estimate. Please, feel free to take a pre-test and post-test if you really want to participate in the study. Please, feel free to take a post-test. However, we recommend not taking the post-test survey if you haven’t exercise throughout the study. Participating in the study is not mandatory and you can withdraw at any time without informing researchers or researcher’s supervisor.

For each question choose from the following alternatives: Post-Test Survey

0-never  1-almost never  2-sometimes  3-fairly often  4-very often

1) ___In the last two weeks, after exercise, how often have you been upset because of something that happened unexpectedly at work?
2) ___In the last two weeks, after exercise, how often have you felt that you were unable to control the important things at your work?
3) ___In the last two weeks, after exercise, how often have you felt nervous and stressed at work?
4) ___In the last two weeks, after exercise, how often have you felt confident about your ability to handle your problems at work?
5) ___In the last two weeks, after exercise, how often have you felt things were going your way at work?
6) ___In the last two weeks, after exercise, how often you found that you would not cope with all the things that you had to do at work?
7) ___In the last two weeks, after exercise, how often have you been able to control irritations at your work?
8) ___In the last two weeks, after exercise, how often have you felt that you were on top of things at your work?
9) ___In the last two weeks, after exercise, how often have you been angered because
of things that happened that were outside of your control at your work?

10) _____In the last two weeks, after exercise, how often have you felt difficulties were piling up so high that you could not overcome them at your work?

Appendix C: Addendum

The Relationship Between Exercise and Stress Level among Youth Care Employees is a joint graduate project between Anastasia Moskalenko and Anthony Pinedo. This document will explain the division of responsibilities between the two parties.

Anastasia Moskalenko is responsible for all the following tasks/document sections:

• Anastasia wrote introduction, which include research question and hypothesis.
• Anastasia wrote literature review.
• Anastasia wrote the discussion section.
• Organized the paper and reference sheet

Anthony Pinedo is responsible for all the following tasks/document sections:

• Anthony is making sure whether the data was collected properly and on time.
• Anthony wrote methods which include independent variable and dependent variable.
• Anthony wrote the data analysis.

Both parties shared responsibilities for the following tasks/document sections:

• Edited and revised capstone paper and poster
• Created capstone poster

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Anastasia Moskalenko Date

Anthony Pinedo Date

Dr. Allen Lipscomb Date

Dr. Amy Levin Date

Dr. Jodi Brown Date

Dr. Amy Levin Date

Dr. Amy Levin Date