# An analysis of self efficacy and self esteem between women engaged in physical exercise and those having a sedentary lifestyle

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### **ABSTRACT**

**Background :** A growing body of research suggests that factors like self-efficacy, self-esteem, wellbeing are strongly associated with psychological health. Research on the importance of exercise in relation to the self –efficacy, self-esteem and exercise in women is scarce. The present study seeks to explore the difference in self-efficacy and self-esteem in women engaged who are engaged in physical exercise and those who aren't involved in any such exercise related activities and having sedentary lifestyle.

**Methodology:** The participants were women in the age range of 24-35 years who were engaged in physical exercise (gymnasium, aerobics class, dancing class, zumba) and women engaged in no physical activity pertaining any form or exercise (sedentary lifestyle). The participants in both the groups were given two scales to be completed with no time constraints. The two scales consisted of Exercise Self Efficacy Scale and Rosenberg's Self Esteem Scale. The data was analysed and the t test was calculated using SPSS package in order to identify if there are differences between the scores of two groups. The data collected from both the groups will be analyzed for descriptive statistics.

**Results :** The mean score for Self efficacy for women involved with physical exercise was significantly greater than that of the group that led a sedentary lifestyle (p = 0.0001). Self-esteem scores were found to be significantly greater in the group of participants who were involved in physical exercise as compared to those who had reported having sedentary lifestyle (p = 0.0004).

**Conclusions:** The results found in this study do indicate that exercise and sedentary lifestyles are related to self-esteem and efficacy. Self-efficacy is associated with exercise in a way that exercise can help a person to increase self-esteem and self-efficacy.

**Keywords**: self efficacy, self esteem, women, sedentary, lifestyle, physical exercise.

# INTRODUCTION

Physical activity is defined as any bodily movement produced by skeletal muscles that result in energy expenditure. The energy expenditure can be measured in kilocalories. Physical activity in daily life can be categorized into occupational, sports, conditioning, household, or other activities. Exercise is a subset of physical activity that is planned, structured, and repetitive and has as a final or an intermediate objective the improvement or maintenance of physical fitness. Physical fitness is a set of attributes that are either health- or skill-related [1].

Sedentary lifestyle is a medical term to indicate a lifestyle with irregular exercise. People who are having sedentary lifestyle are prone to depression, being low self-esteem and

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suffer from health problems [2]. Time spent in sedentary behaviors (e.g., standing or sitting and watching television) may reduce the amount of time available for physical activity [3]. For example, increased television watching for children has been linked to both decreased physical activity and higher obesity prevalence [4]. Adults who spent more time sitting or standing at work were half as likely to achieve regular moderate physical activity levels (outside of work) than those who spent time walking at work and two times less likely than those that did heavy labor [5].

Self-efficacy is the extent or strength of one's belief in one's own ability to complete tasks and reach goals. Self-efficacy affects every area of human endeavor. By determining the beliefs a person holds regarding his or her power to affect situations, it strongly influences both the power a person actually has to face challenges competently and the choices a person is most likely to make. These effects are particularly apparent, and compelling, with regard to behaviors affecting health. Self-efficacy has been found to be the most consistent psychosocial correlate of physical activity [6]. Self-efficacy is a situation-specific form of self-confidence [7] and has been frequently measured by having participants rate their confidence levels to overcome common barriers to physical activity [8]. Research has shown that participants who had a high level of confidence to complete physical activities, despite obstacles, were more likely to actually engage in exercise behaviors than participants with low exercise self-efficacy [9].

Self-esteem reflects a person's overall subjective emotional evaluation of his or her own worth. It is a judgment of oneself as well as an attitude toward the self. Self-esteem encompasses beliefs and emotions such as triumph, despair, pride, and shame. Smith and Mackie [10] defined it by saying "The self-concept is what we think about the self; self-esteem is the positive or negative evaluations of the self, as in how we feel about it." Self-esteem is attractive as a social psychological construct because researchers have conceptualized it as an influential predictor of certain outcomes, such as academic achievement, happiness, satisfaction in marriage and relationships, and criminal behavior.

In sport and exercise, self-esteem is thought of as vital in helping to maintain performance levels, as well as keeping up the motivation to push that little bit harder in the gym or while running on the soggy streets on a winter's morning. Performing well in sport and exercising regularly is also thought as ways of boosting self-esteem [11]. Indeed, holding this assumption, there exists a body of research dedicated to identifying sport environments and instructional strategies to nurture positive self-esteem [12]. There any other types of self-concept that are as adaptive in sport and exercise, or possibly even more adaptive is Self-Compassion. Self-compassion is emerging in the literature as a healthy conceptualization of the self [13]. One may have high self-efficacy for exercise, but if one believes that exercise does not do anything to prevent or remediate aging-related losses, there would be little motivation to continue exercising [14]. Both self-efficacy and outcome expectations (sense of control) play an influential role in the adoption and maintenance of exercise behavior [15]. While self-efficacy is believed to be an important component of physical activity initiation and maintenance, only a handful of interventions have sought to change efficacy beliefs among older adults [16].

Research has also found that those persons with increased self-efficacy are more likely to adhere to exercise programs [17]. Persons with greater self-efficacy expectations also have more success with a variety of health behaviors, such as smoking cessation, weight control, stress reduction, nutritional compliance, and exercise adherence [18]

### **METHODOLOGY**

The purpose of this study was to identify the differences in the Self-esteem as well as Self-efficacy amongst women who are engaged in physical exercise and those who are having sedentary lifestyle. The primary goal was to study the female population who tend to evaluate themselves more in terms of body image, ideal self-image, making them more prone to the negative self-evaluation and psychological disturbances. Hence, it is vital to study how there can be difference in the self-esteem and self-efficacy within women with and without any involvement in physical exercise.

The two groups in the study consisted of the women in the age range of 24-35 years. One group of participants (women) were those who were engaged in the physical exercise as

described in the last segment (N=30). While the other group of participants (women) were those who had sedentary lifestyle (N=30) (no involvement in any form of physical exercise in daily routine).

One group consisted of women involved in any form of physical exercise by working out in gym, aerobics classes, yoga, different from of dancing (zumba, samba) from at least last six months for at least 30 minutes per day and for at least 5 days week. While the other group consisted of women who had sedentary lifestyle, where there was no form of physical exercise in which they were involved. This was analyzed by asking open ended questions about their daily routine. If the information given by the participant matched the research criteria essential for the groups, they were further asked to fill up the given questionnaires.

Exercise Self Efficacy Scale (ESES) was used to measure self efficacy which is a self-report, pen and paper format measure. It measures perceived exercise self-efficacy for various types of physical activities. It requires individuals to indicate their confidence in performing physical activities and exercise. Exercise Self efficacy questionnaire had 10 items and requires individuals to respond to items on a 4-point Likert scale (1-not at all true, 4-always true). The summated score can be calculated where higher score indicating greater perceived Exercise Self Efficacy [19].

Global self-esteem was measured using the 10-item Rosenberg Self-Esteem Scale (RSES) [20]. Participants respond on a scale from 0 (strongly disagree) to 3 (strongly agree), with higher scores indicating higher self-esteem (e.g., "I take a positive attitude toward myself."). Composite scores were created by summing the items after negative items were reverse coded.

Descriptive statistics including means and standard deviations were derived from the sample responses. The collected data was also analyzed for the inferential statistics in the form of t-test for random groups design with one independent variable having two levels was used. Two t tests were calculated. The mean scores obtained from both the groups (exercise group and sedentary lifestyle group) on Self efficacy Scale and on the Rosenberg Self-Esteem Scale were compared through the help of Mann Whitney U test.

## **RESULTS**

A total of 60 individuals participated in the research study. 30 participants were from the group where women reported being actively involved in physical exercise as per the standards set for the research criteria. On the other hand, 30 participants were women who had sedentary lifestyle with absence of any form of physical exercise in their daily routine. The mean score on the RSES was  $23.54 \pm 5.393$  for the physical exercise group versus  $18.2 \pm 5.541$  for the sedentary group. On statistical analysis using the t test this difference was significance (p = 0.0004). Similarly a statistically significant difference was noted in the scores on the Exercise Self Efficacy Scale (ESES) (p = 0.0001) (Table 1).

Scale used	Physical Exercise group (n=30) Mean ± SD	Sedentary lifestyle group (n=30) Mean ± SD	Statistical analysis (df = 58)
Rosenberg Self Esteem Scale	$23.54 \pm 5.393$	$18.2 \pm 5.541$	t = 3.7827 p = 0.0004*
Exercise Self Efficacy Scale	33.02 ± 4.934	26.56 ± 6.92	t = 4.1632 p = 0.0001*

\*significant (all statistics done using the unpaired t test)

## **DISCUSSION**

The primary goal was to study the female population who tend to evaluate themselves more in terms of body image, ideal self-image, making them more prone to the negative self-

evaluation. Hence, it is vital to study how there can be difference in the self-esteem and self-compassion within women with and without any involvement to gym exercise. It has been suggested that for some women, physical appearance may be synonymous with physical or even global self-esteem [21]. Outcomes such as weight loss or increased body attractiveness are also important motives for exercise participation and impact subsequent adherence rates [22]. If physical activity can improve body composition outcomes, increase self-efficacy, and improve physical self-perceptions, it may represent the ideal self-esteem enhancing intervention strategy in this population. However, surprisingly little research has been conducted examining the effects of physical activity on self-efficacy and self-esteem in middle-aged women. The present study provides evidence that self-esteem and self-efficacy are related to well-being in the exercise context, raising the possibility that the working on these constructs may help the individuals to actually focus on mental health, physical outcomes. Self-esteem and self-efficacy plays a key role in the explanation of human behavior and represents an important indicator of emotional and social adjustment [11]. People with higher levels of self-esteem appear to be more emotionally stable and more resilient to stress, possess higher motivation, strive to pursue more difficult goals and persist in achieving those goals [23]. People low in self-esteem, on the other hand, seem to be more susceptible to negative affect such as depression, anxiety, body dissatisfaction, eating disorders and suicidal tendencies [22].

Healthy self-esteem is thus an essential component of well-being and quality of life and has been also linked to positive health behaviors and subsequent health outcomes making it crucial to study in the exercise and sedentary lifestyle context. With increasing age and experience, self-esteem becomes more differentiated and its importance increases in adjustment to various life transitions [24]. Reduced self-esteem may put women at higher risk for other negative outcomes such as increased anxiety, depression, or negative health behaviors. Physical activity is one behavioral modality that may help combat these negative consequences of and it has been shown to enhance various aspects of mental health, including self-esteem [21].

The research findings obtained in this study can be linked to the previous research work in this area. A study investigated the relationship between amount of exercise and psychological well-being in a broadly based sample. A questionnaire assessing amount of exercise, reasons for exercise, body satisfaction, and self-esteem was completed by 252 participants between the ages of 16 and 60 years. Significant negative relationships between amount of exercise and body satisfaction and self-esteem were found for young women, and positive relationships for the remainder of the sample [25].

By working on an intention to increase self-efficacy and esteem of an individual, one would be more apt to engage in healthy behaviors leading to positive mental health- such as effectively dealing with stress, managing their weight, complying with a healthy diet, cessation of smoking, and adhering to exercise. For many people it is difficult to start a regular exercise program because of numerous factors such as perceived barriers, lack of support, or low self-efficacy, financial support, motivation, accessibility to gym, awareness about the importance of physical exercise. Before generalizing the results it is crucial to consider these factors that can hamper one's intention to go for exercise regime.

## **CONCLUSIONS**

The obtained results do give us an element that self-efficacy and self-esteem are related to physical exercise. But, questions about whether self-efficacy and self-esteem influences motives to exercise and other exercise-related outcomes, whether it is self-efficacy that is impacted, or whether these relationships are bidirectional remain unanswered. Future research should continue to investigate the convoluted relationship between sedentary behaviors and physical activity. It may be that the time spent in specific sedentary behaviors (e.g., on the computer, watching television) does not lead to less physical activity; it may have a curvilinear relationship. Further research is needed to compare the effect of varying exercise intensities and durations on both the constructs.

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