

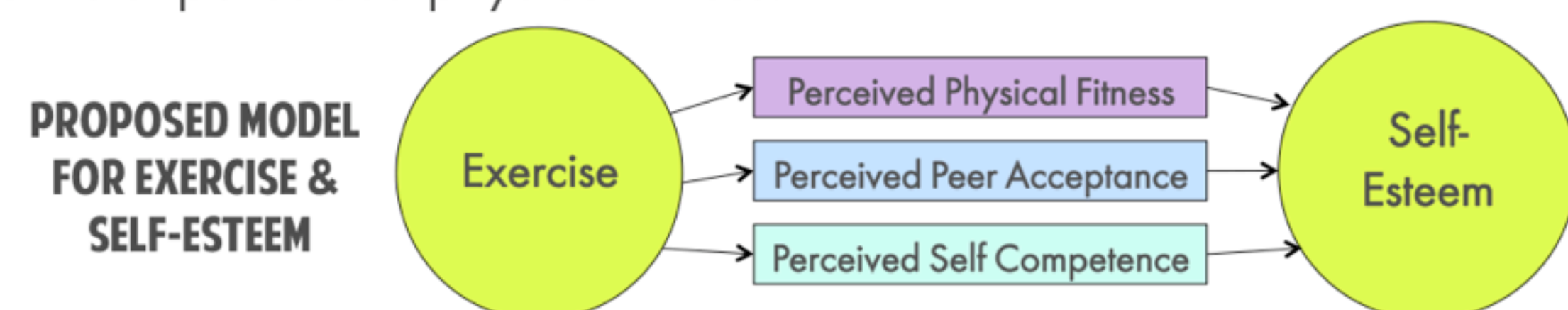
BACKGROUND

In past few decades, researchers have discovered that during adolescence, an individual's exercise participation is associated with their level of self-esteem. The general theory is that individuals who exercise have higher self-esteem than those who do not, although this relationship is indirect. Research has shown that the relationship between exercise and self-esteem is mediated by an individual's perception about their physical fitness, peer acceptance and self-competence [1]. However, no study to this point has tested these three constructs together.

Additional studies have also noted exercise type as being important in the relationship. Team sports have an important influence in an individual's perceived peer acceptance, due to social adhesive properties of group activity. Individual sports have been linked to higher levels of perceived self-competence, as individual sport participants may be more likely to attribute positive outcomes to themselves [2, 3]. While perceived physical fitness has not been linked to a specific type of exercise, it has been noted as being the strongest mediator in the relationship between exercise and self-esteem [4].

HYPOTHESIS & RESEARCH QUESTIONS

I hypothesize that there is an indirect relationship between exercise and self-esteem, with an individual's perception about their physical fitness, peer acceptance and self-competence playing a key role (as moderating factors). I assume team sports are linked to higher levels of perceived peer acceptance, while individual sports are linked to higher levels of perceived self-competence. I predict no differences in terms of perceived physical fitness.



The following questions were used to interrogate this hypothesis:

1. Is there a relationship between exercise and self-esteem?
2. What role do perceptions of physical fitness, peer acceptance and self-competence play in the relationship?
3. Is the relationship between exercise and self-esteem contingent upon the type of exercise an individual chooses?

SAMPLE

This study uses data from the National Longitudinal Study of Adolescent Health (Add Health). The data was compiled between 1994 and 1996. Add Health is a nationally representative sample of adolescents in grades 7-12. The sample was compiled using surveys and select at home interview responses from students at 132 schools that represent a variety of demographic populations.

REFERENCES

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MEASURES

In my research, exercise and exercise type were the independent variables, self-esteem was the dependent variable, and perceived physical fitness, perceived peer acceptance, and perceived self-competence were considered as potential confounders.

The exercise variable was created by dichotomizing (1 = yes, 0 = no) the answers to the following scaled questions:

- During the past week, how many times did you go roller-blading, roller skating, skate boarding, or bicycling?
- During the past week, how many times did you play an active sport, such as baseball, softball, basketball, soccer, swimming or football?
- During the past week, how many times did you do exercise, such as jogging walking, karate, jumping rope, gymnastics or dancing?

Positive responses to the first and/or third questions resulted in placement of respondents in the individual sport category. A positive response to the second question resulted in placement in the team sport category. Individuals who noted participation in both individual and team sports were excluded from exercise type categorization.

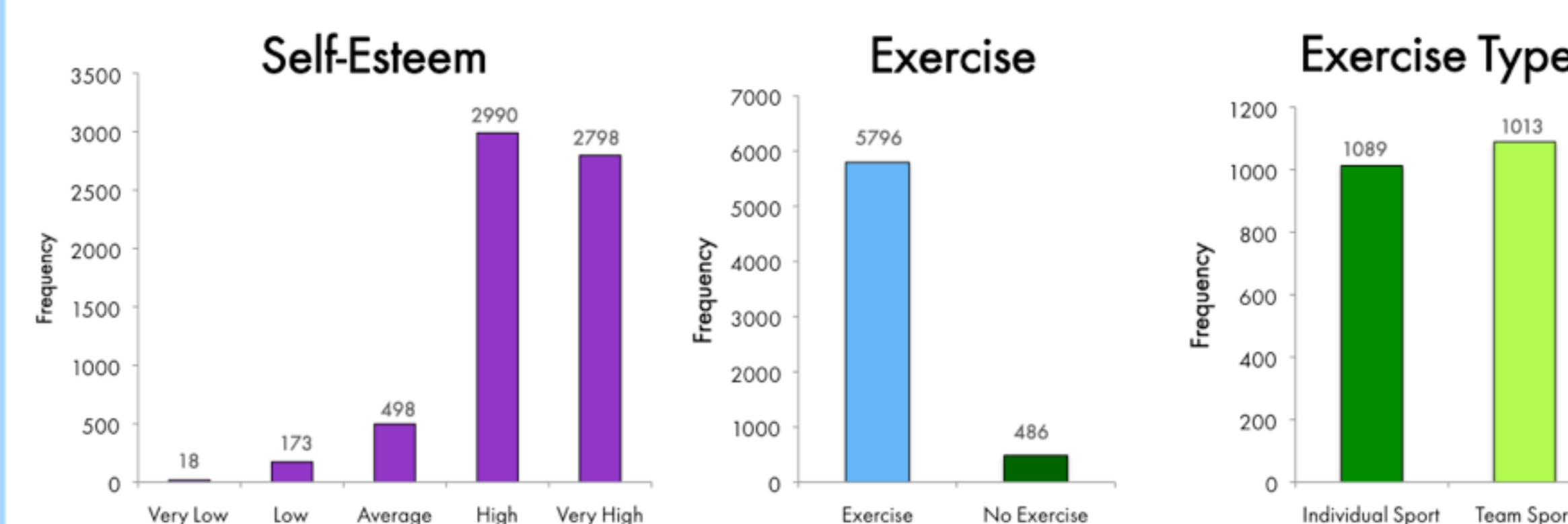
Self-esteem and its mediating factors, perceived physical attractiveness, peer acceptance, and self-competence, were studied by adding up scaled response questions (each with 5 levels). The resulting 9 point scale (from 2-10) was compressed into a 6 point scale (where values 2 and 3 = very low, 4 and 5 = low, 6 = average, 7 and 8 = high, and 9 and 10 = very high). Scaled questions used are as follows:

- Self-esteem: You like yourself just the way you are, You have a lot of good qualities.
- Perceived physical fitness: You are physically fit.
- Perceived peer acceptance: You feel socially accepted, You feel loved and wanted.
- Perceived self-competence: You feel like you are doing everything just about right, You felt that you were just as good as other people.

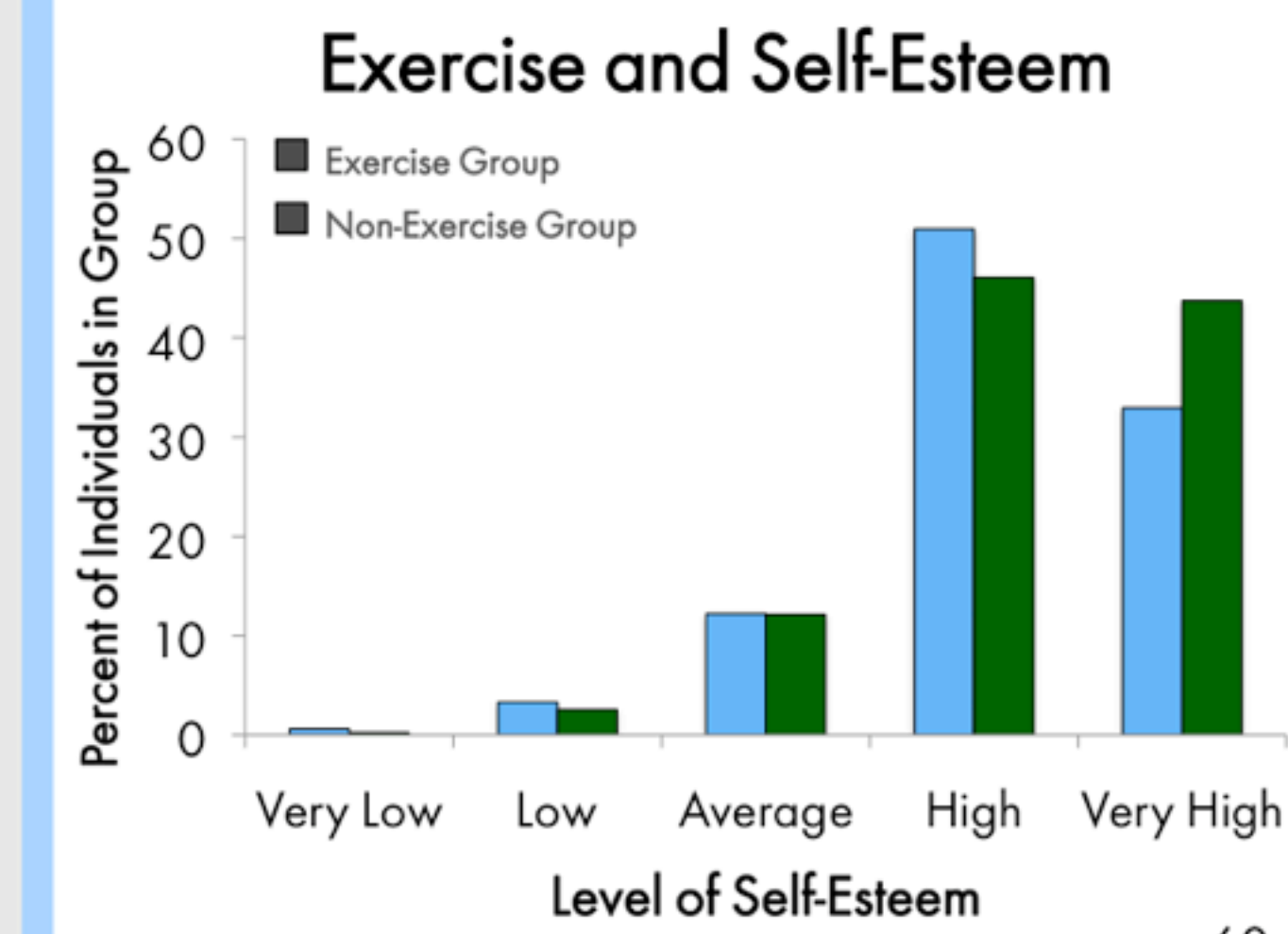
ANALYSES

Analysis of Variance (ANOVA) models were used to determine if there was a significant association between exercise and self-esteem and sport type and self-esteem. Additional ANOVA models tested possible associations between all proposed confounders and both exercise and self-esteem. Multiple regression models were then used to further explore the predictive power of perceived physical fitness, peer acceptance, and self-competence as confounders, as well as to determine the direction of the significant associations. Interactions were also modeled.

FREQUENCY DISTRIBUTIONS



RESULTS



Individuals who exercise report higher levels of self-esteem than those who do not exercise, by an average of .18 points, on a 5-point self-esteem scale.



Team sport participants report higher levels of self-esteem than individual sport participants, by an average of .19 points, on a 5-point self-esteem scale.

DISCUSSION & LIMITATIONS

Individuals who exercise report higher average levels of self-esteem than those who do not exercise. While this association was found to be significant on its own, the relationship is confounded by both perceived physical fitness and perceived peer acceptance.

Both perceived physical fitness and perceived peer acceptance are also independently associated with both self-esteem and exercise. Exercise has a larger effect on an individual's perception of their physical fitness than on their perceived peer acceptance, while perceived peer acceptance has a larger effect on level of self-esteem.

Team sport participants report higher self-esteem than individual sport participants. In this relationship, only perceived physical fitness was a confounder. Both perceived physical fitness and perceived peer acceptance were also found to be independently associated with exercise type. Team sports were reported to have a larger impact on perceived physical fitness than perceived peer acceptance.

While the findings of this study are exciting, it must be noted that exercise isn't the only contributor to high self-esteem. In fact, it isn't necessarily the key player associated with perceived physical fitness and perceived peer acceptance. Future studies could examine exercise with other variables such as nutritional habits and social skills.

Other limitations in the research include the fact that little information exists about differences between voluntary and obligatory exercise participation [5]. Additionally, and probably most importantly, the relationship between exercise and self-esteem may exist in the opposite direction as is posed in my model. This would mean that high self-esteem leads individuals to exercise [6].

CONCLUSIONS

This study is valuable as it suggests the potential of exercise, especially team sports, as a "treatment" for adolescents with low self-esteem. The study also helps to show that perceived physical fitness and perceived peer acceptance are two key factors which predict self-esteem levels in adolescents.