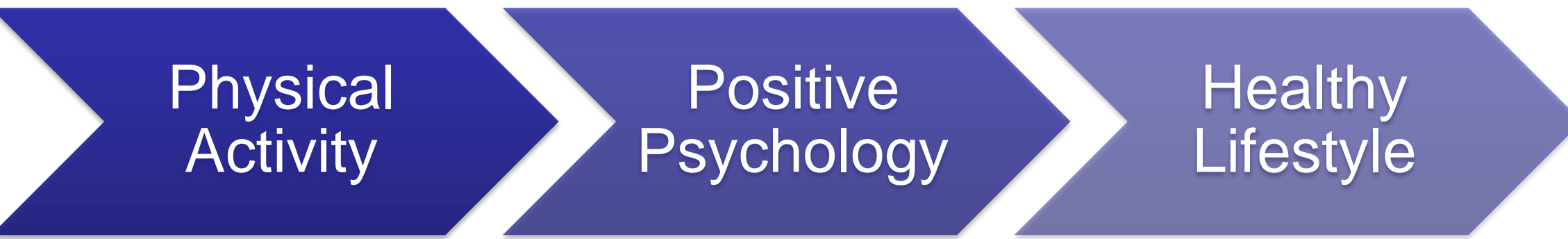


# THE IMPACT OF PHYSICAL ACTIVITY ON POSITIVE PSYCHOLOGY

## Purpose

This research study aims to determine the correlation between physical activity and the health and wellbeing of college students, with a particular attention to the impact of physical activity on positive psychology.



## Abstract

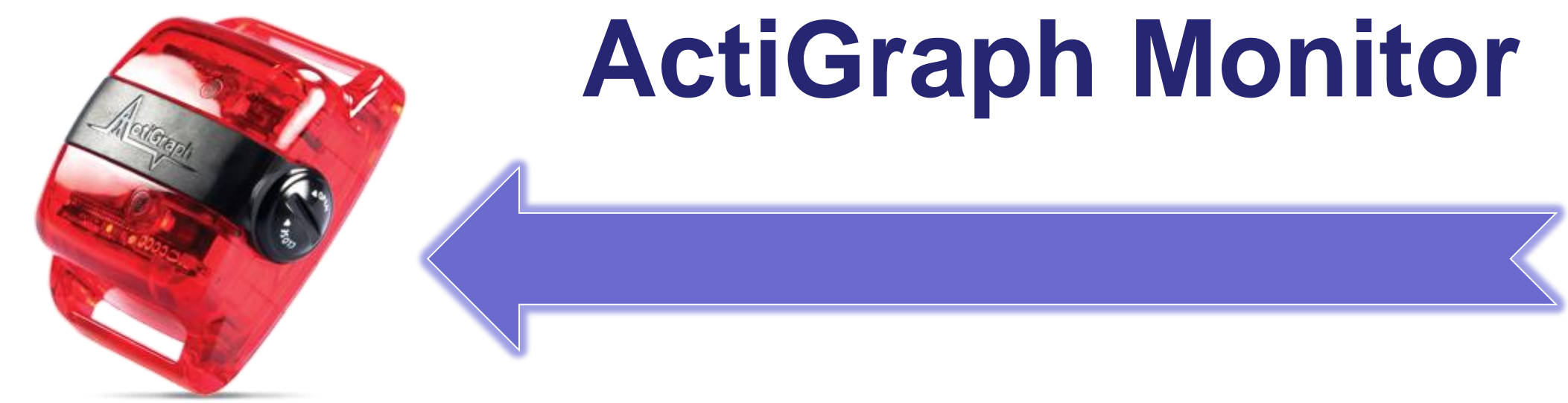
**Background:** In the past, the relationships between physical activity, health, and wellbeing of college students have not been fully determined. In order to effectively address the issue of collegiate student health, more research needs to be conducted to determine the impacts of physical activity on student wellbeing.

**Methods:** Data Sources: Literature search included the compilation of 175+ articles from scholarly databases. Each student was assigned a subtopic with key words to include when searching for relevant articles. My specific study included words such as “physical activity” and “exercise,” and “college students,” “positive psychology,” “sleep,” and “hope”. In addition to the literature review, a sample of 100 college students at a Chinese University took part in a study that had them wear ActiGraph Monitors that recorded PA levels. They also took part in several surveys that measured relative hope levels, curiosity and exploration, gratitude, life satisfaction, and subjective happiness.

**Data Analysis:** Of the collected articles from the select databases, several were reviewed and outlined in summary notes. A summary note template was used in analyzing the sources, with five categories: study citation, research purpose, participants, study design, outcome measures, and key results. Each aspect of the data collected from the ActiGraph monitors was analyzed with SPSS for significant relationships or correlations. The surveys were recorded based on a five-point and seven-point reading scale. Each survey on personal attributes yielded information on the relationships between each personal quality and its relationship with MVPA.

**Results:** Based on preliminary summary note findings, a positive correlation should be observed between physical activity and positive personal quality. Despite this initial hypothesis, the data from the Chinese University students yielded an insignificant relationship between MVPA and personal attributes. This data is surprising, further research needs to be conducted in order to accurately define the relationship between positive personal qualities and various intensities of physical activity.

**Conclusion:** The inconclusive evidence on the relationships between physical activity and personal quality demonstrate a significant need for further research. In addition to the data, a relationship between the combination of adequate MVPA and attributes lead to a higher sleep efficiency, while this was one of the only significant relationships found in this study, it is vital that research be conducted in order to precisely determine the relation between each healthy lifestyle aspect.



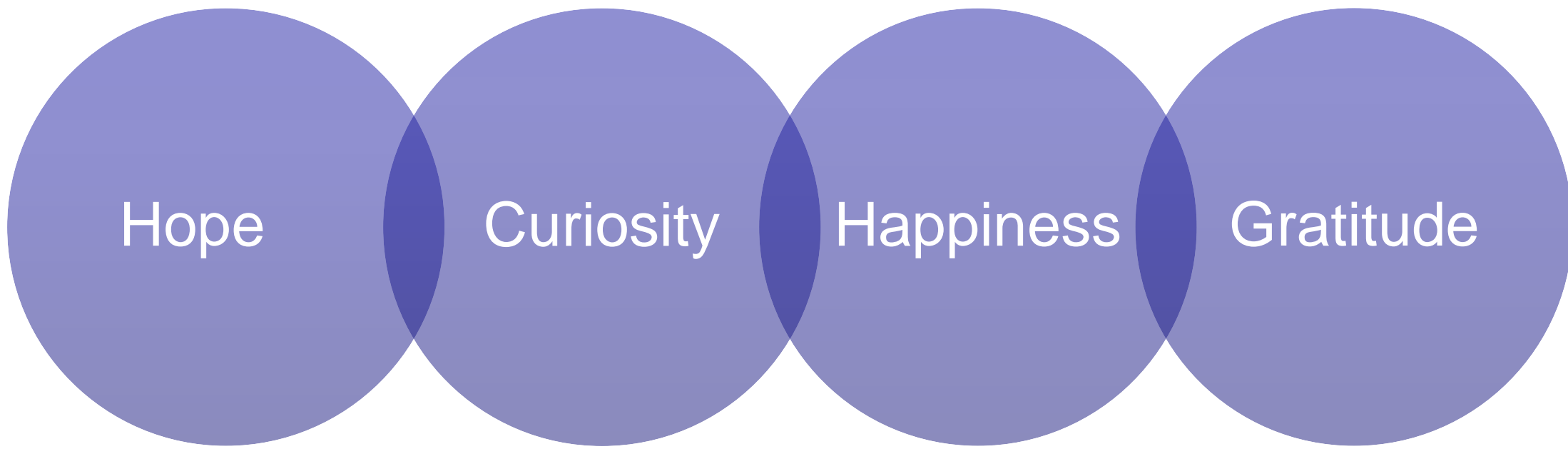
## Methods

**Research Participants**  
2000 college students, with varying grades (ranging freshman to senior) from a Chinese University took part in a larger study, and sub-sample of 100 students was asked to wear the ActiGraph Activity Monitor for seven consecutive days. This study focuses on the data collected from the 100 student sub-sample (83 M 17 F). Data for this cross-sectional study was obtained from Chinese students at the Fudan University in Shanghai, China, in fall semester 2015.

**Outcome Measures**  
*Objectively-measured physical activity and sleep*  
Sub-sample of 100 participants will be randomly asked to wear the ActiGraph Activity Monitor (wBT3x-BT) for 7 consecutive days. The Personal Attributes Questionnaire, Trait Hope Scale, Curiosity and Exploration Inventory, Gratitude Questionnaire, and Satisfaction with Life Scale were all based on five-point reading scales. The Subjective Happiness Scale was the only test to run a seven-point reading scales.

*Health Behavior Survey*  
Survey modified from CDC 2013 and 2015 National Youth Risk Behavior Survey. The Health Behavior Survey is about health behaviors. It consists of four sub-scales including Physical Health, Psychological and Mental Health, Eating, Drinking, and Smoking Behaviors, & Physical Activity Behaviors. Sub-scales contain 5-6 items with 5-point rating scales.

*Personal Attributes Questionnaire*  
Questionnaire investigates psychological wellbeing. It consists of five sub-scales including Hope, Subjective Happiness, Curiosity and Creativity, Gratitude, Satisfaction with Life, and Meaning in Life. It contains 46 items rated with 5-point rating scales.



## Results

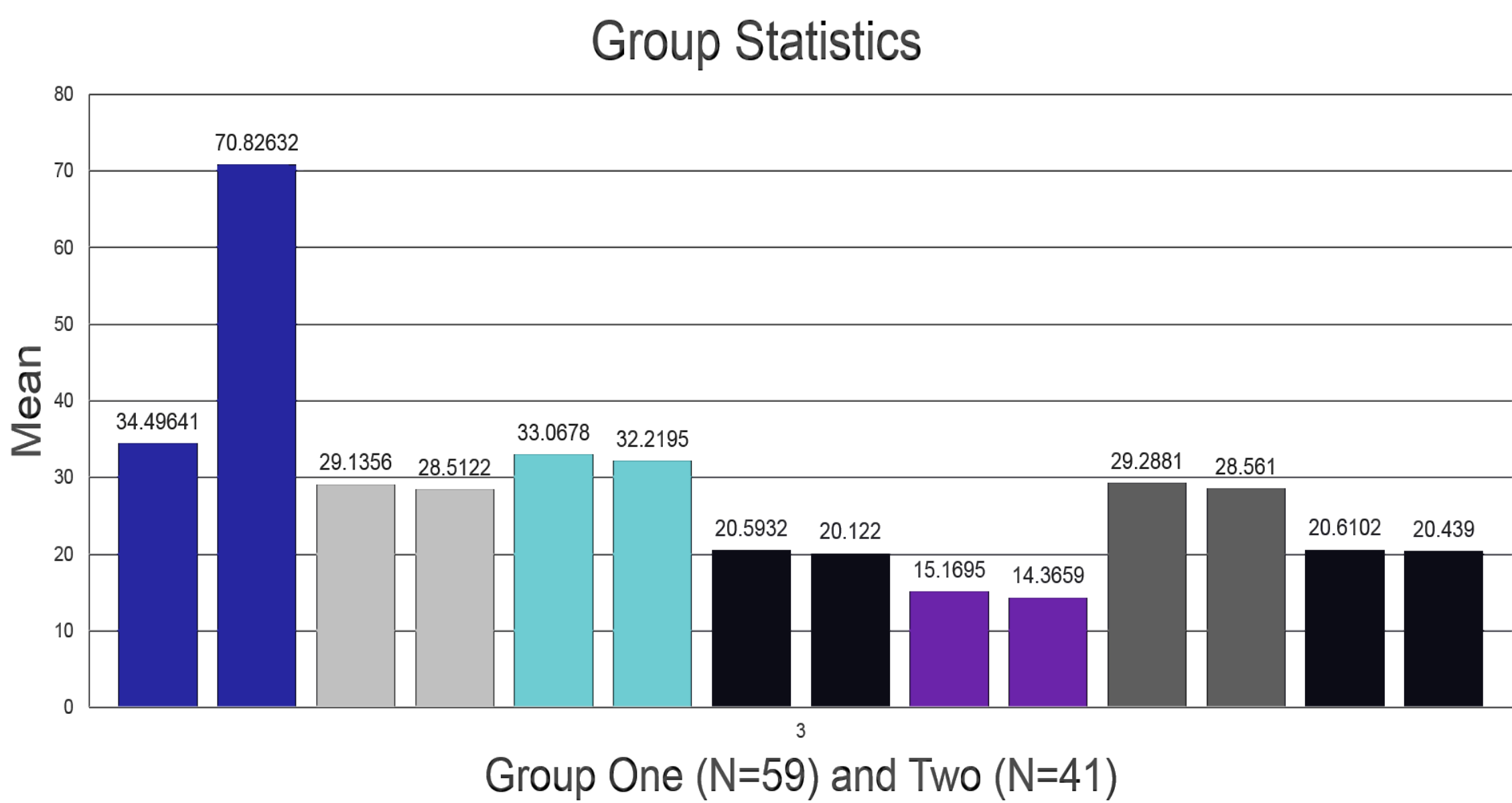
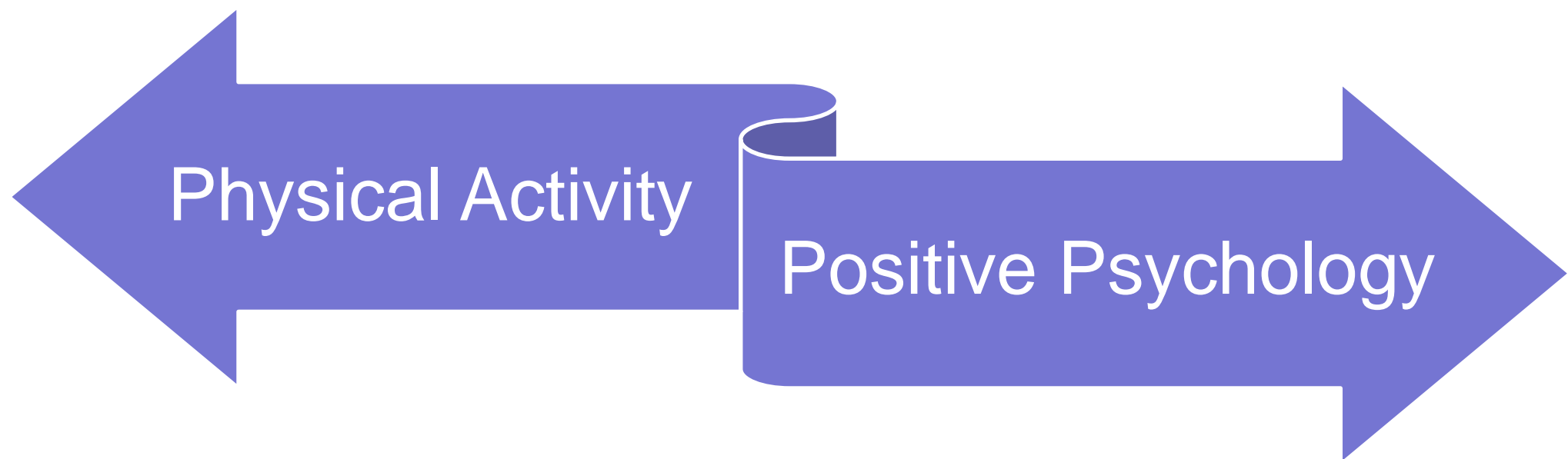
The results of the linear regression analysis demonstrated no significant correlation between Average MVPA daily and Hope, Curiosity, and Gratitude. The regression analysis between sleep efficiency, personal attributes, and average daily MVPA also did not yield significant positive correlations, but it is interesting to note that the ANOVA results demonstrated a correlation that MVPA and the studied positive attributes lead to higher sleep efficiency (F=6.390, Sig.=000).

The group statistics provided results that contradicted the initial hypothesis. Table 2 details the averages of each group: Group 1 (n=59) were participants that did not fall into the MVPA criteria, and Group 2 (n=41) subjects did meet MVPA standards. Each personal quality, when analyzed based on MVPA level, consistently had higher averages in the less active group (group 1). These results directly contradict initial beliefs on the relationships.

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Sponsor: Dr. Weiyun Chen

## Correlations

Pearson Correlation			
	Hope	Curiosity	Gratitude
AVG MVPA Daily	-0.054	-0.067	-0.064
Sig. (1-tailed)			
	Hope	Curiosity	Gratitude
AVG MVPA Daily	0.296	0.253	0.262



## Conclusion/Discussion

With the results demonstrating inconclusive evidence of a significant relationship between physical activity and positive psychology, the purposes of the study were reconsidered. One potential reason for the contradictory results could be the analysis of only moderate-vigorous physical activity (MVPA) as opposed to other forms of PA, such as sedentary or vigorous. Dinger *et. al* did focus their study on MVPA, and found that college students who met current MVPA standards yielded results that positively associated their PA levels with several protective factors (vegetable consumption, lower stress levels, lower drug and alcohol consumption), which would continue to contribute to this study’s contradictory results. It is interesting to note that among the groups separated based on PA levels for this study, the group 1, those who did not fall into the MVPA level, consistently reported higher levels of each positive attribute (Table 2). Further research must be conducted in order to accurately define this relationship among college students, as positive attitudes towards physical has a significant role in the overall health and wellbeing of young adults worldwide.

(Physical Activity Clipart)  
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(ActiGraph Monitor)  
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