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The Relationship Between Physical Fitness and Psychological Well-being

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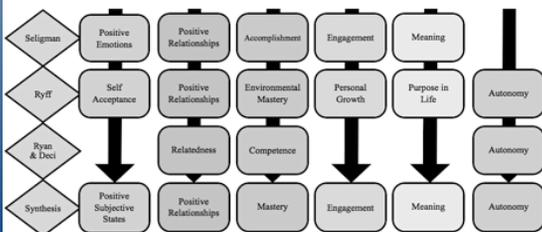
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The Relationship Between Physical Fitness and Psychological Well-being

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Introduction

As our society becomes more unhealthy, the demand to understand the body's connection with the brain increases. Through the lens of positive psychology, this study increases the understanding of well-being as a construct and its relationship with physical fitness. The operational definition of well-being was synthesized from Seligman's (2011) PERMA theory, Ryan and Deci's (2000) self-determination theory, and Ryff's (1989) six-factor theory to consist of six areas: positive subjective states, positive relationships, mastery, engagement, meaning, and autonomy. Wherein well-being is defined as an individual's summation of these six elements that may range from high to low. Measures of body composition, body mass index (BMI), muscle endurance, and cardiovascular fitness (VO₂max) were used to develop a fitness index for each person. From the review of the present literature, there is a clear relationship between physical activity and each of these components of psychological well-being. There are some factors within the present conceptualization of well-being more studied than others. It is also notable that physical well-being is more directly and strongly associated with some elements more than others.



Conceptualization of Well-being

Method

Participants

A Concordia University fitness class was used for the convenience sample in September 2013. 12 participants (4 males; 8 females) completed the experiment. These students were undergraduates at a small private university with a mean age of 21 (SD = 2.9), mean height 67 in. (SD = 4.11), and a mean weight of 154.72 lbs. (SD = 28.28).

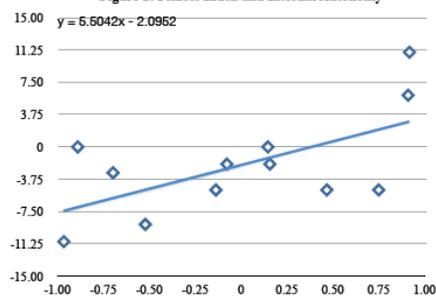
Materials and Procedure

After completing the informed consent, each of the participants filled out two likert-item format surveys; Seligman's PERMA-profiler and Levenson's (1976) multidimensional locus of control scale. Relevant demographic information was gathered and a personal fitness-oriented goal was recorded for each person. Body composition and BMI was measured directly and muscle endurance and cardiovascular fitness were reported from in-class testing. The participants had class 50 minutes 3 times a week over 3 months, and then post-testing took place in December 2013. All of the tests were done again and each of the participants recorded whether they believed they achieved their goal or not. A difference column was created for each measure. The difference scores for each physical measurement (VO₂max, pushups, situps, BMI, body fat percentage) were converted to z-scores to standardize the measurements so a fitness index could be constructed. The fitness index, gender, and perceived goal-attainment were the independent variables and the internal locus of control scale difference score and PERMA difference score were both used as the

Results

A Pearson's r test for correlation was conducted to examine the relationship between the PERMA well-being model and the internal sub-scale of Levenson's locus of control scale. The relationship was not statistically significant ($r = -0.231$). Due to the size of the sample, a simple linear regression was chosen to examine the predictors of the PERMA well-being score ($M = -0.94$, $SD = 3.99$; Urdan, 2005). The fitness index ($M = 0.0022$, $SD = 0.67$), gender, and goal attainment were separately tested. No statistically significant relationships were reported ($p > .05$). A simple linear regression analysis was conducted to examine the predictors of autonomy ($M = 2.08$, $SD = 6.02$). Three predictors were separately entered into successive regression tests: fitness index ($M = 2.19$, $SD = 3.3$), gender, and goal attainment. There was no significant relationship with gender or goal attainment ($p > .05$). However, the change score in the fitness index accounted for 31.7% of the variance in autonomy and was a significant predictor of autonomy ($p = .000$).

Figure 2: Fitness Index and Internal Autonomy



The hypothesis for this study was not fully supported. For this sample, physical fitness did not predict well-being. However, fitness was shown to have a linear

Conclusions

These results are incongruent with the literature in the field of health psychology. The relationship between autonomy and physical fitness does support the inclusion of autonomy for overall well-being, even if the correlation between PERMA and autonomy for this particular sample was insignificant. Due to the inconsistencies in defining autonomy, further research is needed to clarify these linguistic differences to determine where and why it is valued. Also, more research is needed to determine if autonomy is a stand-alone element which contributes to well-being, or if perhaps it enhances other elements that contribute to well-being. The trends of the world call for a larger focus on promotion of psychological, as well as, physical well-being; thus the mechanisms that influence

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