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The Effect of Physical Activity and ACE Scores on Psychological vs. Physiological Addiction

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Addiction is a growing problem within the United States. Rehabilitation facilities have exercise as a component of their program, yet these facilities are not always within reach of every addict. Specifically looking at psychological and physiological addiction types allows for a narrower approach to finding the root of addictive tendencies. Understanding that addiction is a chronic disease that is treatable with integrated treatment methods, it is imperative to find the root of an addict's addictive tendencies. **PURPOSE:** To determine if there is a triangular relationship between addiction, physical activity, and adverse childhood experience (ACE) scores, looking specifically at psychological and physiological addiction types. **METHODS:** In preliminary data collection, 20 subjects 16 female (M=24.44 years, SD=10.7 years), and 4 males (M=27.75 years, SD=9.7 years) self-reported data, 8 subjects self-reported addictive behavior. Subjects were recruited from West Liberty University via-. email. Subjects completed a self-reported online anonymous 4-section survey concerning subject demographics, physical activity levels, adverse childhood experiences, and addictive tendencies. Subject's age, biological sex, race, and education level were self-reported. The International Physical Activity Questionnaire - Short Form (IPAQ-SF; 2002) was used to self-report physical activity levels. ACEs were self-reported through the Health-Resiliency-Stress Questionnaire Part D (HRSQ; Susie Wiet, MD, 2019). Addictive tendencies were self-reported through questions regarding the criteria for psychological and physiological addiction from the Diagnostic and Statistical Manual from the American Psychiatric Association. Correlations were assessed for total minutes of vigorous exercise, total minutes of moderate exercise, total minutes of light exercise, total minutes sedentary in the past 7 days, ACE scores, and addictive tendency score. **RESULTS:** Significant results were found among ACE scores, and addictive tendency scores $r=0.759$, $p < 0.001$. Preliminary data based on 7-day reporting shows a positive trend among total minutes sedentary and addictive tendency score $r=0.391$, $p < 0.088$, and a negative trend among total minutes of vigorous exercise and addictive tendency score $r=-0.409$, $p < 0.073$. **CONCLUSION:** Preliminary data shows that higher reported ACE scores are correlated with higher addictive tendencies. Preliminary data shows a positive trend that being sedentary is correlated with higher addictive tendencies and a negative trend that more vigorous activity is correlated with less addictive tendencies. **SIGNIFICANCE/NOVELTY:** Results from this study show the importance of integrated treatment methods for addicts. By finding the root of addictive tendencies, medical professionals are more equipped to help addicts get clean and stay clean for a happier and healthier lifestyle.