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Motivational Characteristics and Fulfillment of Psychological Needs Among Physically Active Undergraduate Students

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Purpose
Identify and analyze how motivational characteristics, fulfillment of psychological needs, and individual experiences and beliefs influence physical activity (PA).

Background
Over 50% of young adults, ages 18-24, have at least one coronary heart disease risk factor and nearly 25% have advanced atherosclerotic lesions. In 2017, the Centers for Disease Control and Prevention reported that 36% of 20-39 year olds were obese. Obesity rates continue to rise despite widespread public information and substantial research confirming physical activity (PA) plays a critical role in overall physical health. Further, research suggests young adulthood may be the best time to alter lifestyle habits (i.e., PA) as they are being established. Research on correlates and determinants of PA has shown an association with age, sex, health status, self-efficacy, and motivation. Self Determination Theory (SDT) provides a framework for understanding motivation and, more specifically, motivation to perform PA. SDT defines three primary psychological needs: autonomy, competence, and relatedness. SDT differentiates types of motivation to better understand the varied effects on behavior. This study focuses on a narrative approach to elucidate the experiences and beliefs of highly active undergraduate students ages 18-24. A narrative approach is used to collect their “movement stories” to eventually be used and studied as motivational tools in public health settings.

Methods
Participants were recruited using nominated sampling and a public advertising campaign. Participants met International Physical Activity Questionnaire (IPAQ) scores defining moderate-vigorous physical activity. Informed by Self-Determination Theory (SDT), the Motives for Physical Activity Questionnaire (MPAQR) was used to assess motivational characteristics. The Basic Psychological Need Satisfaction and Frustration Scale – General Measure was used to assess fulfillment of psychological needs. In-person, semi-structured interviews were recorded and then transcribed. Investigators independently coded operationally-defined thematic statements then met to establish consensus for final codes.

Results: Statistical Significance

Interviews: Qualitative analysis showed participants expressed higher life satisfaction (41) than frustration (19). Collectively, statements expressing motivation were most common for competence (60), relatedness (35), autonomy (34), and interest/enjoyment (34). The least commonly mentioned motivation type were appearance (8) and fitness (12).

Surveys: Satisfaction was a common characteristic among this sample population. Psychological needs were analyzed with the BPNSF survey. A Wilcoxon signed rank test revealed that psychological satisfaction was significantly greater than psychological frustration for each of the three psychological needs defined by SDT with a large effect size for each (Autonomy n = 20, p = .05, z = -3.89, r = .87; Competence n = 20, p = .05, z = -3.90, r = .89; Relatedness n = 20, p = .05, z = -3.90, r = .87). Motivational variables were analyzed with the MPAM-R, a 7-point scale, results were as follows: interest/enjoyment = 6.2, competence = 6.0, fitness = 6.0, appearance = 5.1, social = 3.9.

Results: Participant Responses

Psych Satisfaction
“It’s a good way to clear the mind. It’s hard to stress out about an assignment when you’re passing a rugby ball and tackling.”

Autonomy
“Everything I do is completely of my own volition.”

Psych Satisfaction, Competence, & Appearance
“I feel more powerful and confident. I find beauty in strength.”

Relatedness & Psych Satisfaction
“A lot of that good feeling is part of being on a team, being with others, and feeling motivated. Also, being able to move and get endorphins in my brain helps me feel better.”

Psych Satisfaction
“Moving is what makes me feel better. Once I go out and do something, I feel happier.”

Motivational Statements

Discussion
Psychological Satisfaction and Frustration
In surveys, participants report greater satisfaction than frustration across the three domains of basic psychological needs, which is consistent with past research that demonstrates PA increases well-being. In interviews, participants often express statements that interconnect psychological satisfaction with needs for competence, autonomy, relatedness, and interest/enjoyment.

Motivation
Coded interviews reveal the prevailing needs for mastery of skills (competence), meaningful human interaction (relatedness), a sense of personal control (autonomy), and genuine joy in the activity (interest/enjoyment). These primary motivational factors are rarely discussed in the healthcare domain and larger culture. Rather, healthcare providers tell patients to exercise for the sake of being healthy (fitness), and the culture promotes exercise for sexual attractiveness (appearance). These are the least important motivational factors among our participants, which may explain why current messaging of PA is ineffective. Further, all participants expressed varying degrees of motivational factors, indicating the need for multiple approaches to and customization of messaging.

The considerable occurrence of competence may stem from the college context and student identity. College is a highly structured environment that increases competence in students through their acquisition of new knowledge and skills. In addition, most colleges promote competitive sports. All statements about competition are coded as competence. Lastly, the common theme of participation in weight-lifting is seen in the female participants. Their shared narrative of strength training as related to competence and autonomy strikingly contrasts previous generations of women.

Conclusion
Clinicians may better promote PA in this population by demonstrating the tendency toward greater psychological satisfaction. A variety of motivational factors–competence, relatedness, autonomy, and interest/enjoyment–can be explored and tailored to patient specific needs. Adjusting interventions to meet the inherent complexities of human motivation, experiences, and beliefs is likely necessary for increasing PA.