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Relations between Basic Psychological Needs and Health-Related Fitness Measures in Male and Female College Students

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INTRODUCTION: Self-determination theory (SDT; Deci & Ryan, 1985) is a prominent theoretical framework applied to assess exercise participation (Kirkland et al., 2011). SDT holds that satisfying the three basic psychological needs (BPNs; autonomy, competence, and relatedness) fosters self-determined motivation, personal growth, and psychosocial well-being (Deci & Ryan, 1985). Relations between BPNs and exercise participation may vary between sexes (Martinez et al., 2013). Given that exercise participation is highly related to health-related fitness (Blair et al., 2001) investigating whether the relations between BPNs and fitness outcomes also vary between sexes is warranted.

PURPOSE: To investigate the relations between BSNs and fitness outcomes in male and female college students.

**METHOD**: Participants were 564 male and 503 female college students ( $M_{age} = 20.57 \pm 3.82$  years) enrolled in a health and wellness course. Students completed a survey assessing the BPNs (Vlachopoulos & Michailidou, 2006), as well as the FITNESSGRAM® test battery (Cooper Institute, 2013), which includes measures of cardiorespiratory fitness (Progressive Aerobic Cardiovascular Endurance Run [PACER]), muscular strength and endurance (curl-up and push-up), and body composition (body fat %). Correlation analyses were conducted by sex to examine bivariate relationships between BPN and fitness outcomes.

**RESULTS:** Analyses revealed that BPNs were significantly correlated with each fitness outcome (p < .05). Correlation magnitudes were not statistically different between males and females based on Fisher's z tests (p > .05). In both genders, competence had significantly higher correlations with the fitness outcomes (excluding PACER) when compared to relatedness (p < .05), but did not significantly differ from autonomy (p > .05).

**CONCLUSION:** Results indicated that all three BSNs related to components of physical fitness in men and women enrolled in a health and wellness course. Interestingly, competence had the strongest relationships with fitness outcomes. Based on this study and previous research, fitness instructors may want to promote competence by providing social support and constructive individualized feedback, believing in participants' abilities, acknowledging their improvements and successful experiences.

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Comparing Bmi With Health Related Quality Of Life In College Freshman: The Herd Study

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Obesity in the United States is significantly higher than it was in the previous generation. West Virginia's obesity rate currently exceeds 30% of its population. Previous literature has demonstrated an inverse relationship between BMI (body mass index) and health-related quality of life, however these associations rarely include college-aged adults

PURPOSE: To examine the relationship between BMI and health related quality of life in college aged freshman enrolled in the HERD (Higher Education Reducing Diabetes) Study at Marshall University in Huntington, West Virginia.

METHODS: The HERD Study is a 4 year longitudinal, randomized study examining the effects of a freshman year, healthy lifestyle intervention on the reduction of student's risk factors for developing type 2 diabetes and cardiometabolic disease. Freshmen were recruited during the Fall 2016 Freshman Week of Welcome at Marshall University. Quality of Life was assessed at baseline using the Short Form-12 Questionnaire. The SF-12 is a 12 item, validated survey assessing participant's physical and mental quality of life.

**RESULTS:** To date, 76 freshman have enrolled into the HERD study [age=  $18.5\pm2.36$  years; female=60.5% (n=46); 85.5% Caucasian (n=65); BMI=  $26.5\pm5.85$  kg/m<sup>2</sup>. Fifty-three percent (n=40) of the students were deemed overweight or obese (BMI > 25 kg/m<sup>2</sup>). Students with a BMI  $\ge 25$  kg/m<sup>2</sup> were significantly less likely to record their health as very good or excellent compared to those with a BMI < 25 kg/m<sup>2</sup> (p=0.002). Students with a BMI  $\ge 25$  kg/m<sup>2</sup> were more likely to record that over the past four weeks, their emotional health caused them to accomplish less than usual (p=0.017). Also, students with a BMI  $\ge 25$  were more likely to record that their health (physical and emotional) interfered with social activities (p=0.004).

CONCLUSIONS: The BMI of college-aged freshman appears to have an impact on health related quality of life with higher BMI contributing to reduced health quality, productivity and social factors. Future efforts will examine strategies for decreasing BMI to improve the physical and mental health of young adults.

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Cancer Survivors' Experiences Of Physical Activity: Exercise As A Vehicle For Recovery?

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Physical activity (PA) can have benefits for individuals at each stage of the cancer journey, including improved fitness and quality of life. However, many cancer survivors are not meeting the physical activity recommendations.

**PURPOSE:** The aim of this study was to explore cancer survivors' experiences of PA across the cancer journey.

**METHODS:** Participants were recruited from a cancer support centre and a community-based exercise programme that caters for cancer survivors. To ensure that a variety of opinions and experiences of PA across the cancer journey were captured, purposive sampling methods were used to recruit male and female cancer survivors of all ages who were either currently active or inactive. The focus group discussions were transcribed verbatim and were analysed using a thematic analysis approach.

**RESULTS:** 7 focus groups were conducted with 41 cancer survivors. Each group consisted of 4-8 participants. Most cancer survivors reported a decrease in their PA levels during treatment which was commonly attributed to treatment-related side effects. Participants reported that a period of isolation and a decrease in wellbeing can be experienced after treatment completion. Participants identified the lack of PA advice and services throughout the cancer journey and the need for a holistic approach to rehabilitation. Many viewed exercise as a vehicle for recovery as it facilitates 'self-power' - taking ownership and control of one's PA to increase wellbeing. Some participants reported that engagement in PA after treatment was empowering and that it increased their self-confidence and belief in their physical capabilities. Other participants reported that PA was difficult to initiate and maintain for a number of reasons, including the negative impact of treatment-related side effects on the physical ability to be active. Individuals reported that exercising with other cancer survivors created an accepting and supportive environment for exercise.

**CONCLUSIONS:** These findings suggest that there is a gap in the cancer care pathway post-treatment completion. An exercise rehabilitation programme at this time could support cancer survivors to increase their physical and psychological well-being.