Does Physical Activity Level Affect Physical and Mental Health in Young Adult Students?

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✓ Background: It is known that many young adult college students are suffered from physical inactivity, high level of stress and depression. However, how lack of physical activity level and health-related behavior affect their health was not sufficiently reported.

✓ Purpose: This study was performed to identify whether physical activity level affects physiological, psychological variables in these ages.

✓ Methods: Data were collected in February and March, 2015 from 99 undergraduate and graduate students in one university. The participants were assessed for body composition analysis, blood pressure, bone mineral density, heart rate variability (HRV) and blood analysis at the university health care center. Also, physical activity level, health promoting behavior, and depression were measured using self-report questionnaire.

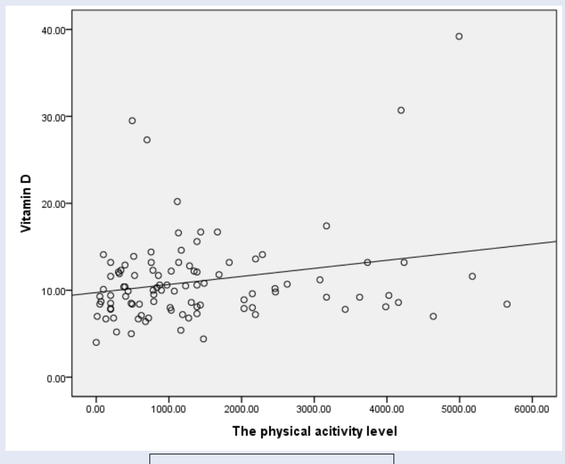
RESULTS

The physical activity level showed significant correlations with Vitamin D (r=.233, p=.021), and muscle amount in body composition (r=.243, p=.015). However, body fat percentage did not show significant relations with physical activity level (r=-.157, p=.122). In Heart rate viability (HRV) analysis, we found significant correlations of physical activity with mean heart rate (r=-.331, p=.001), parasympathetic activation (r=.209, p=.038), stress resistance (r=.233, p=.020). In addition, physical activity level showed significant negative correlation with depression (r=-263, p=.008) and positive correlation with health promoting behavior (r=.388, p<.001).

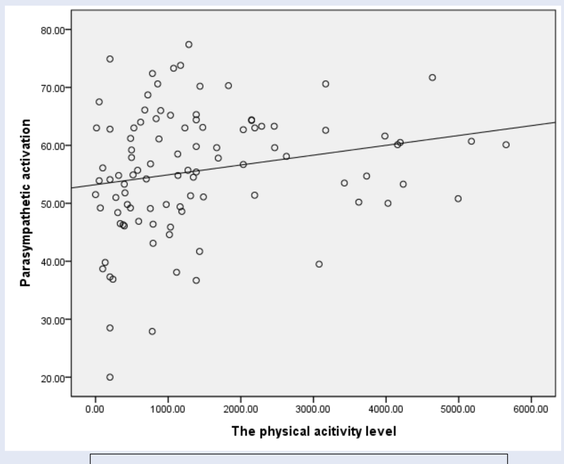
Table. Correlations with physical activity level

Variables	Vit. D	Muscle amount	Body fat percentage	Heart rate	parasympathetic activation	Stress resistance	Depression	Health promoting behavior
Physical activity level	.233 (p=.021)	.243 (P=.015)	-.157 (p=.122)	-.331 (p=.001)	.209 (p=.038)	.233 (p=.020)	-263 (p=.008)	.338 (p<.001)

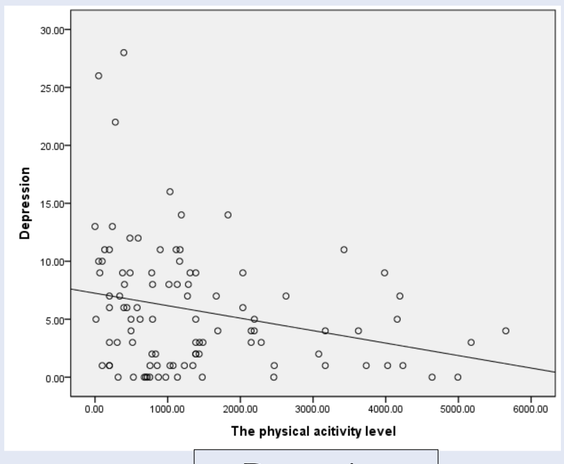
Figure. Graphs of correlations with physical activity level



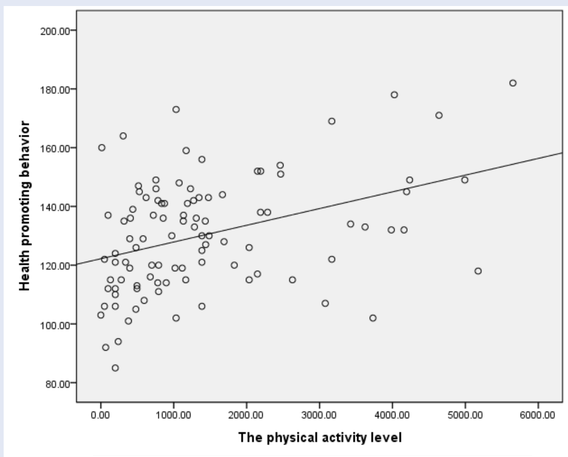
Vit. D



Parasympathetic Activation



Depression



Health promoting behavior

CONCLUSION

The physical activity level showed significant relationships with health status and health promoting behavior of college students. Strategies for improving physical activity and health promoting behavior for young adult college students need to be developed.