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The effects of a physical education based STRESS MANAGEMENT on psychosocial well-being among adolescents

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Fear of highs


Claustrophobia I


2 against 1


Problem-focused coping

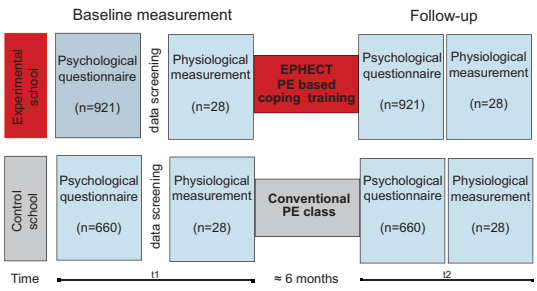

Clautstrophobia II

Background

Adolescence is defined as a vulnerable period characterized by several physiological and psychosocial changes that affect health and behavior [1]. The lack of adequate coping strategies are often acompanied by neagative health behaviors. Among vocational students, additional responsibilities arise while transitioning to a vocational school [2], balancing academic and job requirements. The cumulation of such stressful life events might result in higher risk for stress-related diseases later in life. However, research on vocational students is scarce. This is surprising, given that 74% of all secondary school diplomas in Switzerland are granted to students with vocational education and training (VET) [3]. Therefore, it is important do develop effective strategies to foster stress resilience and to promote coping skills during this life span. The aims of the present study were therefore, to implement a P.E. based coping training (EPHECT) and to evaluate the effects on psychosocial well-being.

Participants and Procedure

A total of 1581 adolescents from two vocational schools (M_{age}=17.90, SD=1.36; 43% females) participated in this quasi-experimental study. One school served as the experimental group (n=921) and received EPHECT, while students of the control school (n=660) had conventional PE lessons. Teachers implemented the program on a weekly basis. Booklets for teachers helped to keep the workload low. Booklets for students helped to manage a transfer from the gym into everyday life. To evaluate the program effectiveness, psychological questionnaires were administered to all students twice (pre and post intervention).



The implementation rate for each class and student was assessed. Based on these data, students were post-hoc selected to either one of the three groups:

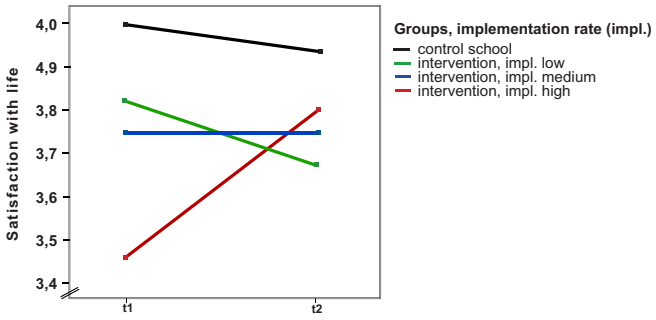
- low implementation rate (n=164)
- medium implementation rate (n=203)
- high implementation rate (n=34)

All implementation groups and the control group were then analyzed and compared, using repeated measures ANOVAs (time x group) (SPSS 20).

Hypothesis

1. The control group and the group with a low implementation rate show no differences.
2. Students with a medium implementation rate show small improvements of psychosocial well-being.
3. Students with a high implementation rate show the greatest improvements of psychosocial well-being.

Results



Time x group interactions

- Significant time x group effects were found for satisfaction with life, $F(3,83)=3.14$, $p<.05$, $\eta^2=.011$
- A high implementation rate indicated greater improvements compared to controls, low and medium implementation group students.
- Although not significant, students of the high implementation rate group reported lower stress levels after six month of implementation, $F(3,83)=1.03$, $p>.05$, $\eta^2=.004$
- No significant time x group interactions were found for depressive symptoms.

Discussion

Given that the implementation rate was high, EPHECT is a useful intervention program to increase satisfaction with life and to foster coping skills among vocational students. This P.E. based program allows students to experience their psychological and physiological responses to stress directly and offers opportunities to trying different coping strategies. The use of appropriate coping skills is key to deal successfully with stress in order to prevent future stress-related health problems.

References

[1] Brand , S., Kirov, R. (2011). Sleep and its importance in adolescence and in common adolescent somatic and psychiatric conditions. International Journal of General Medicine, 4, 425-442.

[2] Narring, F., Tschumper, A., Inderwildi Bonivento, L., Jeanning, A., Addor, V., Bütikhofer, A. et al. (2002). Gesundheit und Lebensstil 16- bis 20-Jähriger in der Schweiz. SMASH 2002: Swiss multicenter adolescents survey on health 2002. Lausanne: Institut universitaire de médicine sociale et préventive, 2004 (Raisons de santé, 95b).

[3] OECD. Education at a Glance 2012. OECD Indicators. Paris: OECD Publishing; 2012.

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