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THE EFFECT OF A PHYSICAL ACTIVITY INTERVENTION ON FACETS OF MENTAL WELL-BEING

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In adolescents, the annual rate of depression in the United States is 8% to 9% (Motl et al., 2004). Higher levels of physical activity in adolescents are associated with decreased depressive symptoms, more positive mood states and improvements in self-esteem (Motl et al., 2004; Scully, 1998). Overall, children who are more active have fewer emotional, behavioral and social problems (Griffiths et al., 2016). Health promotion research focused on enhancing mental well-being in children via physical activity interventions have been undervalued thus far (Christiansen et al., 2017; Patalay et al., 2016; Penedo & Dahn, 2005; Smedegaard et al., 2016). Therefore, the purpose of this study was to examine the effects of a physical activity intervention on children's sense of thriving. It was hypothesized the physical activity intervention would increase positive facets of thriving (joy, friendship, strength, confidence) and decrease negative facets of thriving (anger, sadness).

The sample included three children (1 boy, 2 girls, average age = 9 years old). The intervention occurred at the Midvale Boys and Girls Club in Utah on Wednesday and Friday afternoons from 3pm to 4pm for three weeks. The intervention consisted of discussions about joy, friendship, anger, sadness, confidence, and strength preceded sessions of physical activity. The children's sense of thriving and physical activity were measured at pre-intervention and post-intervention using a modified version of The Physical Activity Questionnaire (PAQ-C) and an adapted version of the Brief Inventory of Thriving (BIT).

The data were analyzed using means, standard deviations, and Wilcoxon Signed Ranks Tests (WSRT). Children's amount of physical activity and joy increased while their levels of anger and sadness decreased following the intervention. However, children's measures of friendship, strength, and confidence also decreased after the physical activity intervention. None of the changes in the constructs of thriving or physical activity were statistically significant (p > 0.05). Children's perceived anger and sadness could have decreased because the intervention helped children release these emotions in a positive way. Children's levels of joy potentially increased because they could interact with each other in an inclusive social environment and they internalized the idea of happiness. The unanticipated changes in friendship, confidence, and strength were influenced by one child, whose responses appeared to be outliers. Anecdotally the children involved in the physical activity intervention seemed to enhance their positive sense of thriving. The children appeared to have a more optimistic attitude and their ability to handle adverse situations without confrontation improved. Physical activity interventions have the potential to improve children's mental well-being while increasing their levels of physical activity. Thus, further investigation into the design, delivery, and effect of physical activity interventions to improve thriving is needed.

References

- Christiansen, L. B., Lund-Cramer, P., Brondeel, R., Smedegaard, S., Holt, A. -., & Skovgaard, T. (2018). Improving children's physical self-perception through a school-based physical activity intervention: The move for well-being in school study. *Mental Health and Physical Activity*, 14, 31-38. doi: 10.1016/j.mhpa.2017.12.005
- Griffiths, L. J., Geraci, M., Cortina-Borja, M., Sera, F., Law, C., Joshi, H., . . . Dezateux, C. (2016). Associations between children's behavioural and emotional development and objectively measured physical activity and sedentary time: Findings from the UK millennium cohort study. *Longitudinal and Life Course Studies*, 7(2), 124-143. doi:10.14301/llcs.v7i2.353
- Motl, R. W., Birnbaum, A. S., Kubik, M. Y., & Dishman, R. K. (2004). Naturally occurring changes in physical activity are inversely related to depressive symptoms during early adolescence. *Psychosomatic Medicine*, 66(3), 336-342. doi:10.1097/01.psy.0000126205.35683.0a
- Patalay, P., & Fitzsimons, E. (2016). Correlates of mental illness and wellbeing in children: Are they the same? results from the UK millennium cohort study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 55(9), 771-783. doi:10.1016/j.jaac.2016.05.019
- Penedo, F. J., & Dahn, J. R. (2005). Exercise and well-being: A review of mental and physical health benefits associated with physical activity. *Current Opinion in Psychiatry*, 18(2), 189-193.
- Scully, D. (1998). Physical exercise and psychological well being: A critical review. *British Journal of Sports Medicine*, 32(2), 111-120.
- Smedegaard, S., Christiansen, L. B., Lund-Cramer, P., Bredahl, T., & Skovgaard, T. (2016). Improving the well-being of children and youths: A randomized multicomponent, schoolbased, physical activity intervention. *BMC Public Health*, 16(1), 1-11. doi:10.1186/s12889-016-3794-2