

## Digest

### Enhancing Changes in Self-Regulation for Eating for Individuals With Obesity

Regular physical activity and healthy dietary changes can promote weight loss. However, there are gaps in research examining whether making changes to exercise and eating behaviors facilitate or hinder one another, in what order they should be changed, and by what mechanisms they are changed. Social cognitive theory purports that enhanced self-regulation is required for health behavior change and may be a mechanism of change. Improvements to exercise self-regulation and eating self-regulation have individually been shown to improve the requisite behaviors. But, what happens in programs targeting both exercise and eating? The purpose of this study was to examine whether improvements in exercise self-regulation promote improved eating self-regulation which sequentially mediate the relationship between increased exercise and improved eating behaviors. Furthermore, it investigated whether these improvements were moderated by weight status (Class 1 obesity vs. Class 2 vs. Class 3). Participants ( $N = 147$ ) were a subgroup of women from a community-based cognitive behavioral weight management program. Changes in exercise and eating behaviors and their self-regulation were examined over 6 months. Using serial mediation, the following pathway was examined: exercise change  $\rightarrow$  exercise self-regulation change  $\rightarrow$  eating self-regulation change  $\rightarrow$  eating behavior change (two outcomes: changes in consumption of fruits/vegetables and of sweets). Both serial mediations were significant. Improvements were observed for women across all three classes of obesity; however, the greatest self-regulation improvements were observed for women with lower degrees of obesity. Class of obesity did not moderate the mediating relationships. This study demonstrates self-regulation as a mechanism through which health behaviors can be improved. Findings suggest that there may be some generalizability between the development of self-regulatory skills for different health behaviors. The authors discuss findings relative to constructing weight loss interventions.

Annesi, J.J. (2019). Change in behavioral exercise program-associated self-regulation enhances self-regulation-induced eating improvements across levels of obesity severity. *Evaluation and Program Planning*, 75, 31–37. doi:10.1016/j.evalprogplan.2019.04.002

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### Varying by Ethnicity/Race: Exploring Correlates for Physical Activity in Adolescents

Given the sex and ethnicity differences in moderate to vigorous physical activity, research has examined differences in correlates across these subgroups. In this study, a socioecological model was used to compare multiple correlates across different ethnicities/races within one sample. Specifically, it examined if correlates of self-reported moderate to vigorous physical activity at the personal, social, and neighborhood level vary across ethnicity/race (white, African American, Hispanic, and Asian) and sex. Participants

included 2,770 adolescents and their parents from the EAT-2010 (Eating and Activity in Teens) study in Minnesota. School physical activity environments (e.g., facilities and policies) were reported by administrators. School and home environment measures were collected from geographic information systems. Surveys completed by the adolescents included self-reported physical activity; personal (e.g., physical activity enjoyment, barriers, self-efficacy); social (e.g., perceived parental activity, friend's value of physical activity); and environmental (e.g., perceived safety, daily screen time, television in bedroom) correlates. Hierarchical linear regression models were stratified by four ethnicities/races for each sex. Adjustments for age and parent education and income were included in the model. Differences in physical activity levels were observed by age and ethnicity/race, with boys reporting more physical activity than girls and both white boys and girls reporting more physical activity than the other ethnicities/races. Of the 47 correlates examined, eight were similar across all ethnicities/races and sexes including self-efficacy, enjoyment, self-management, parent direct help, friend support, barriers, father's perceived physical activity, and physical activity of female friends. Among girls, neighborhood road connectivity, distance to trail, and mother's physical activity differed by ethnicity/race. Increased road connectivity was associated with physical activity for Hispanic and Asian girls. For white and African American girls, living near a trail was beneficial for physical activity but the opposite was seen for Asian girls. Perceptions of mother's physical activity were associated with physical activity among African American and Hispanic girls. Among boys, home media equipment and sports participation varied by ethnicity/race. Participating in sports was a positive correlate for white, African American, and Hispanic boys but not for Asian boys. The availability of home media equipment was negatively associated with physical activity among white boys but positively associated with physical activity among Hispanic boys. The authors suggest that as many correlates were similar across ethnicities, common intervention designs can be used that cross all ethnicities and sexes. However, as several correlates did vary by ethnicity/race and sex, the authors suggest a need to explore factors that may moderate these patterns they observed.

Miller, J.M., Pereira, M.A., Wolfson, J., Laska, M.N., Nelson, T.F., & Neumark-Sztainer, D. (2019). Are correlates of physical activity in adolescents similar across ethnicity/race and sex: Implications for interventions. *Journal of Physical Activity and Health*, 16, 1163–1174. doi:10.1123/jpah.2018-0600

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### Do Coaches Think Specialization Is Good? It Depends

Research on sport specialization has indicated that early specialization can lead to increased frequency of injury as well as a number of negative psychological outcomes including burnout, lower

community engagement, and the lack of a multidimensional identity. However, even with the current research on the detrimental effects of specialization, early specialization in youth athletes continues to be a concerning trend. One aspect that has not received as much attention as the consequences of specialization is the attitudes surrounding specialization by key stakeholders. The current study investigated attitudes toward specialization in youth sport coaches. Specifically, the study compared how these attitudes differed between high school and club sport coaches. In addition, the study investigated if certain background characteristics (team age, years of coaching experience, self-rated coach quality, coach age, and coach sex) predicted attitudes toward specialization. In total, 769 coaches fully completed a questionnaire (high school coaches  $n=497$ ; club coaches  $n=272$ ) assessing perceptions of specialization. Club coaches were more likely to rate specialization as positive than high school coaches. Furthermore, high school coaches' perceptions of specialization differed by team sex (both male and female athletes > male or female only athletes) and sport (soccer, volleyball > basketball), but not by high school size. Similarly, for club coaches, specialization perceptions differed by team sex (both male and female athletes > male or female only athletes) and sport (soccer > basketball, volleyball), but not by community size. Finally, in a multiple linear regression analysis, no background characteristics predicted perceptions of specialization in the high school or club sport coach groups. One limitation of the study, despite partnership with multiple organizations, was the low response rate for the study (~7%), which might limit the generalizability of the results to other domains. In summary, possibly due to the nature of the environment in which coaches participate, club coaches had more positive evaluations of specialization than high school coaches. Furthermore, the competitive context, and not any of the selected coach background characteristics, was the most significant indicator of coaches' perceptions of specialization.

DiSanti, J.S., Post, E.G., Bell, D.R., Schaefer, D.A., Brooks, M.A., McGuine, T.A., & Erickson, K. (2019). Exploring coaches' perceptions of youth sport specialization: A comparison of high school and club sport contexts. *Journal of Athletic Training, 54*, 1055–1060. doi:10.4085/1062-6050-409-18

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## Goal Setting: Differences Across Season

Even though goal-setting principles are well established in the literature, very little is known about how closely teams follow the most common goal-setting principles. In the present study, researchers investigated whether teams set goals; the types of goals they set; who participated in the goal-setting process (coaches, athletes, or a combination of the two); and whether teams evaluated goals and goal attainment throughout the course of the season. A total of 147 Finnish female amateur athletes completed three online surveys (T1, after the first game of the season; T2, middle of regular season; and T3, following the final game of season) that asked athletes to indicate if they followed specific goal-setting practices. At Time 1, nearly all players indicated the team set an outcome goal (85.6%), and this goal was set in a collaborative manner between athletes and coaches (84%). In addition, researchers presented athletes with 25 different process and performance-related goals about various skills (physical, tactical, technical, and

psychological), and athletes indicated that they set an average of 21.7 collective process and performance goals. At Time 2, a majority of participants indicated that they evaluated progress toward their outcome goal (85.6%) and that evaluation occurred in a collaborative manner with athletes and coaches involved (57.6%). Athletes also indicated that they evaluated progress toward different process and performance goals, but infrequently wrote down those goals. At Time 3, a majority of athletes indicated that they evaluated their outcome goal (73.4%) and again the evaluation was a collaboration between players and coaches (72.2%). However, only 43.8% of athletes indicated their team evaluated the achievement of process and performance goals. Interestingly, when teams were sorted into groups based on (a) consistently following goal-setting principles, (b) imprecisely following goal-setting principles, or (c) not following goal-setting principles, Groups 1 and 3 both averaged more points per game than teams in Group 2. Overall, the study indicated that a majority of teams set multiple types of goals at the beginning of the season. In addition, most teams evaluated their goals, but the number of teams that did so was higher in terms of outcome goals than performance and process goals and more teams evaluated their progress at the midpoint of the season than at end of season.

Forsblom, K., Kontinen, N., Weinberg, R., Matilainen, P., & Lintunen, T. (2019). Perceived goal setting practices across a competitive season. *International Journal of Sports Science & Coaching, 14*, 765–778. doi:10.1177/1747954119880994

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## Be Mindful. Be Active?

Mindfulness is a concept that has been garnering greater attention as a tool for promoting physical activity. Being mindful means paying attention on purpose to in-the-moment experiences with an open, nonjudgmental, and accepting attitude. Although there are varying forms of mindfulness approaches and training, generally mindfulness training seeks to enhance self-regulation, emotion regulation, psychological flexibility, and/or attention. Relative to the physical activity context, mindfulness training could seek to focus attention on and help regulate painful or uncomfortable sensations during exercise. It could also be used to help novice exercisers accept the struggle of committing to a regular exercise routine. The purposes of this study were to review the evidence regarding the association between dispositional mindfulness and physical activity and to summarize outcomes of mindfulness interventions for physical activity. After performing a literature search, 40 papers were included in the review (19 cross-sectional, one longitudinal, five cohorts, one nonrandomized control trial, and 14 randomized control trials). Across the 19 cross-sectional studies, dispositional mindfulness was more often found to be positively associated with physical activity (six studies reported no association). Although some studies used cross-sectional designs to test mediation, potential mediators of the mindfulness–physical activity relationship included: stress, psychological flexibility, negative affect and shame, satisfaction, and state of mindfulness. Based on intervention designs, there was mixed support for the between-subjects effects of mindfulness training. Although intervention formats varied (e.g., in duration, length, delivery format), mindfulness training may be more effective if tailored to physical activity and related cognitions. This review synthesized research