



Relationship of Physical Activity Self-Efficacy and Psychobehavioral Characteristics of Overweight and Obese African American Children

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Abstract

Objectives:

report and parent-report Behavioral Assessment for Children, 2nd edition (BASC-2).

Methods:

the Children's Self-perceptions of Adequacy in and Predilection for Physical Activity (CSAPPA) questionnaire.

Results:

Conclusion:

Keywords: Physical activity; Self efficacy; Psychobehavior; Overweight and obese; African American

Introduction

The prevalence of childhood overweight and obesity has reached epidemic levels in developed countries [1] and this is of substantial clinical and public health concern. Physical activity is a key component of the expenditure aspect of energy balance, providing a major avenue for caloric consumption. Regular physical activity has favorable effects on weight maintenance and/or loss, improved psychological well-being, and cardiovascular fitness in adolescents [2]. According to

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distress and a lower prevalence of adaptive indicators than norm populations of children (General Norm, as defined for BASC-2 [17], includes a large national sample that is representative of U.S. children with regard to race/ethnicity, parent education, geographic region) matched for age and gender [18]. Furthermore, while the scores for these children were not related to indicators of body fatness including BMI, waist circumference, and or percent body fat, insulin resistance was associated with less favorable BASC scores in this cohort [19]. In conceptualizing the current analysis, we reasoned that more insulin resistant children with less favorable BASC scores would not likely feel able to engage in behaviors, such as physical activity, that could have prevented this insulin resistant state. In the absence of research examining this hypothesis we undertook this investigation using a convenience sample of overweight and obese, inner-city overweight and obese African American children.

In this analysis, the relationship of physical activity self-efficacy to child and parent reported psychobehavioral characteristics of overweight and obese African American children from an inner city area was examined. We hypothesized that children's self-reported self-efficacy toward physical activity would be related to more favorable scores on child-report and parent-report Behavioral Assessment for Children, 2nd edition (BASC-2).

METHODS

Study Design

The data included in this study were collected in 2007 from an ancillary study, Taking Action Together that focused on risk reduction for type 2 diabetes (registered with ClinicalTrials.gov #NCT01039116 and described in detail elsewhere [20]). Participants in this ancillary study were included in the parent intervention study. To be eligible for the main study, children had at least one African American biological parent and a Body Mass Index (BMI) greater than the 85

evaluated in the in regression models. As these interactions terms were not statistically significant in the physical activity self-efficacy models, it was determined that the relationships were not significantly different for the two genders. Data for boys and girls were analyzed together, with gender included as a covariate. Using methods previously described [20,25], child age, pubertal state, family socioeconomic status and intervention group assignment were also included as covariates in all models.

Statistical analyses were performed using PASW Statistics 18 (IBM Inc.) for Windows. Statistical significance was defined as $p < 0.05$, with $p < 0.10$ being considered marginally significant. Since a total of 176

	Index Characteristics (n=125)			Mean ± SEM		
	# items					

significant using Parent-Report of the child's characteristics. Kamel [28] using the Strengths and Difficulties Questionnaire [29] in a small sample of overweight/obese British children reported strong correlations between higher child-report CSAPPA scores and fewer parent reports of peer problems and emotional symptoms. In our cohort, however, only the child and not the parent, judged these characteristics to be related. This discrepancy is not surprising since others have previously reported discrepancies between child and parent report assessments [17,30,31]. Possible causes that have been suggested include a parental lack of awareness of youth's problems, and distortion due to parental depression or anxiety regarding the child's condition [32,33]. Thus, parental assessments have been shown by some to emphasize problem behaviors and underestimate strengths of the child. Differences in cultural values have also been suggested to account for discrepancies among responders [34]. Parents may be more

susceptible to a social expectation bias. Nonetheless, the self-report BASC scores reflect the child's impression of his/her self, regardless of whether or not that impression is in full agreement with the opinions or observations of others. Likewise, self-perception is a key component of self-efficacy and is a characteristic that cannot be easily judged by others. The results of the current study demonstrate that children who perceive themselves as having lower physical activity self-efficacy also report higher scores for characteristics of clinical concern including the emotional symptoms index, inattention/hyperactivity composite, internalizing composite, and school problems composite; and lower scores for the personal adjustment composite. Further study will be needed to determine whether or not it is possible to independently change a child's self-perception of his/her physical activity self-efficacy without also targeting the child's broader, related, psychobehavioral state.

Citation:

In our study CSAPPA index and subscales predilection, adequacy, and enjoyment of physical education showed satisfactory reliability (>0.70) which supports the existing reports on high reliability and validity of these scales. Mean CSAPPA score were marginally higher

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