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The Theory of Planned Behavior: Predicting Physical Activity and Cardiorespiratory Fitness in African American Children

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The purpose of our study was to evaluate the ability of the Theory of Planned Behavior (TPB) to predict African American children's moderate to vigorous physical activity (MVPA) and cardiorespiratory fitness. Children (N = 548, ages 9–12) completed questionnaires assessing the TPB constructs and MVPA and then had their cardiorespiratory fitness assessed with the Progressive Aerobic Cardiovascular Endurance Run (PACER) test. Commonly used Structural Equation Modeling fit indices suggested the model was an adequate representation for the relationships within the data. However, results also suggested an extended model which was examined and supported. Tests of direct paths from subjective norm and control to intention indicated that both variables were significant predictors of intention. Furthermore, the impact of attitude on intention was mediated by both subjective norm and control. Finally MVPA predicted cardiorespiratory fitness. Most of the standardized path coefficients fell in the small to moderate range, with the strongest effects evident for the predictors of intention and the smallest effect evident for the link from MVPA to cardiorespiratory fitness.

Key Words: health, physical education, sport

Understanding the determinants of African American children's physical activity and cardiorespiratory fitness is important. African American children are less likely to engage in moderate to vigorous physical activity in general as well as during physical education (Kann, Warren, Harris, et al., 1996; Lindquist, Reynolds, & Goran, 1999) and are less fit (Lindquist et al., 1999) relative to Caucasian children. Female African American adolescents are at particular risk for inactivity (U.S. Dept. of Health and Human Services, 1996). African American adolescents also report fewer convenient locations at which to be active such as gyms and parks, making it more difficult to be physically active (Sallis, Zakarian, Hovell, & Hofstetter, 1996b). The benefits of regular physical activity such as a reduced risk

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of diabetes, colon cancer, high blood pressure, and heart disease (U.S. Dept. HHS, 1996) make it critical to understand the determinants of physical activity among populations most at risk.

The Theory of Planned Behavior (TPB: Ajzen, 1991; Godin & Shephard, 1986) is a promising framework with which to understand childhood MVPA. According to the TPB, children with strong intentions to engage in MVPA are more likely to do so than children with weaker intentions (Ajzen, 1991). Intentions are thought to be influenced by social expectations (i.e., subjective norm), individual attitudes, and perceptions of control. First, children who have a favorable attitude toward MVPA are more likely to have strong intentions than children who have an unfavorable attitude. Second, children who perceive that significant others (e.g., parents) expect them to engage in MVPA, and who are motivated to comply with that expectation, are likely to have strong intentions to participate in MVPA compared to children who perceive weaker subjective norms. Finally, children who express strong feelings of control over their physical activity are likely to report strong intentions to perform MVPA and subsequently engage in more MVPA leading to higher levels of cardiorespiratory fitness compared to children with weaker perceptions of control.

Researchers have used the TPB to study exercise and physical activity with adults (Godin, 1994; Hausenblas, Carron, & Mack, 1997), but little research has been conducted with African American children. Trost, Saunders, and Ward (2002) found support for the TPB with a sample composed of 55% African American girls, although only 6% of variance in MVPA was accounted for by intention. Motl, Dishman, Saunders, et al. (2002) reported that both attitude and subjective norm were predictive of African American[1] and Caucasian girls' intentions to be physically active, but intention was unrelated to physical activity. Perceived behavioral control, by contrast, was related to vigorous but not moderate physical activity. Pate, Trost, Felton, et al. (1997) examined mostly African American 5th-grade students using Social Cognitive Theory and the Theory of Reasoned Action, a theory very similar to the TPB. They found that children reporting strong self-efficacy for seeking support for their physical activity involvement were more likely to be vigorously physically active than less efficacious children.

Cumulatively, the above research efforts indicate that examining psychosocial antecedents of physical activity using the TPB shows promise for increasing our understanding of African American children's physical activity. TPB researchers, however, have often neglected to assess physical activity and cardiorespiratory fitness in children, thereby confining their tests of the TPB to predicting intention. This is an important gap in the literature because the limited research with children suggests there may be a link between physical activity and cardiorespiratory fitness (Lindquist et al., 1999; Morrow & Freedson, 1994; Pate, Dawda, & Ross, 1990). Finallly, few research efforts in this area have focused on African American children from large inner city settings. To address the dearth of research in this area we designed the current study. More specifically, we examined the TPB constructs, MVPA, and cardiorespiratory fitness in a population of African American children from a large inner city environment.

[1]SEM results indicated invariance across race.

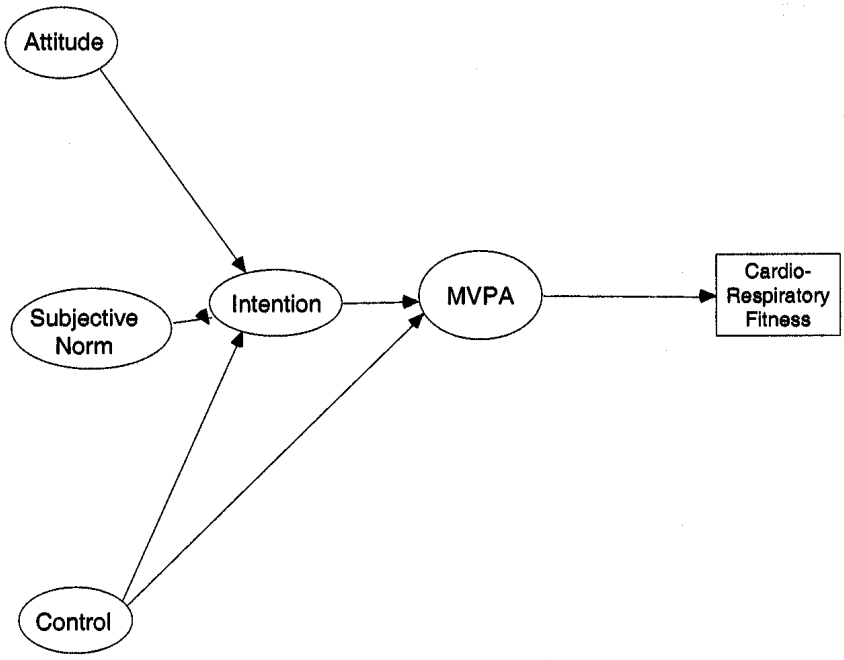

Figure 1 — Theory of Planned Behavior model.

To summarize, the primary purpose of the present study was to determine whether the TPB was useful in predicting MVPA and cardiorespiratory fitness in African American children. Our model (see Figure 1) included a number of direct paths and one indirect path that were evaluated using SEM analyses. First, we specified direct paths from subjective norm, attitude, and perceived behavioral control to intention. We predicted that children with favorable attitudes, strong perceptions of subjective norms, and feelings of control, all regarding MVPA, would express greater intentions to engage in MVPA than children reporting less positive cognitions. We then posited a direct link from intention to MVPA. We anticipated that children expressing strong intentions to be moderately to vigorously physically active would report higher levels of MVPA compared to children reporting weaker intentions. We also postulated a direct path from perceived behavioral control to MVPA in addition to the indirect influence of perceived behavioral control through intention to MVPA. Finally, we hypothesized a positive link between MVPA and cardiorespiratory fitness.

Method

Participants and Instruments

A total of 548 African American children from 30 schools in a large inner city school district in the U.S. Midwest participated in the current study. They ranged in age from 9 to 12 years (M = 9.81, SD = .70). Breakdown by gender was 45.0% female and 55.0% male.

Students were first asked to report their gender, age, ethnic background, and grade. They then completed a brief questionnaire reflecting the TPB constructs and MVPA. All questions assessing the TPB constructs were based on guidelines provided by Ajzen (2004) and Ajzen and Madden (1986), and on TPB research in PA with children of similar ages (e.g., Hagger, Chatzisarantis, & Biddle, 2001; Trost et al., 2002). Questions for assessing MVPA were based on researcher recommendations (Welk, Corbin, & Dale, 2000) and prior research with children of comparable ages (e.g., Sallis et al., 1996a). We used the phrase "breathe hard or feel tired" instead of "moderate to vigorous" to be sure the children understood the type of physical activity we were investigating. The phrase "breathe hard or feel tired" has been successfully used in previous research with 5th-grade children (Sallis et al., 1996a).

Intention (I). Children responded to three items on a 7-point Likert scale. The anchors of "definitely false/definitely true" were used for the questions "I have decided to do physical activity that makes me breathe hard or feel tired tomorrow," and "I will try to do physical activity that makes me breathe hard or feel tired tomorrow." The anchor of "definitely do/definitely do not" was used for the question "I plan to do physical activity that makes me breathe hard or feel tired tomorrow."

Attitude (AT). We used three questions suggested by Ajzen (2004) to assess attitude with scoring based on a 7-point Likert scale. Students responded to three sets of anchors for the question "Participating in physical activity that makes me breathe hard or feel tired is…" To assess the experiential aspect of attitudes, one question was anchored with "unenjoyable" and "enjoyable." To measure the instrumental or functional part of attitudes we used the opposing anchors, "unhealthy" and "healthy." Finally, to obtain an overall evaluation we used the anchors of "bad" and "good" (Ajzen, 2004).

Perceived Behavioral Control (PBC). Participants were asked the following two questions: "If I want to, I can participate in physical activity that makes me breathe hard or feel tired" and "It is mostly up to me whether I participate in physical activity that makes me breathe hard or feel tired." Stems of "strongly disagree" and "strongly agree" anchoring a 7-point Likert scale were used.

Subjective Norm (SN). Subjective norm was determined by examining students' perceptions of the beliefs of four important social groups (i.e., physical education teachers, parents, classroom teachers, and classmates) and their motivation to comply with those beliefs. Based on the four groups noted above, an 8-item scale was created consisting of four pairs of questions. Participants responded on a 7-point Likert scale. Each question in a pair was multiplied together, resulting in a score that could range from 0 to 49 for each of the four social groups. A total score was obtained by averaging the four scores representing each of the four social groups.

An example of one pair of questions, followed with appropriate anchors, stated, "My parents believe that it is important that I participate in physical activity that makes me breathe hard or feel tired" (strongly disagree/strongly agree) and "How important is it to you that your parents believe you should participate in physical activity that makes you breathe hard or feel tired?" ("not at all important/very important").

Moderate to Vigorous Physical Activity (MVPA). We employed the 4-item Godin Leisure-Time Exercise Questionnaire (GLTEQ: Godin & Shephard, 1985),

in part because it has specific items on strenuous and moderate physical activity. It has also been shown to produce reliable and valid scores with children and adolescents (Sallis, 1991; Sallis, Buono, Roby, Micale, & Nelson, 1993; Sallis et al., 1996a). Students first read the header, "How many times in an average week do you do the following kinds of exercise for more than 15 minutes during your free time?" Below the header, students responded to the following three statements: Strenuous exercise (heart beats rapidly), Moderate exercise (not exhausting), and Mild exercise (minimal effort). Following each statement, many examples of age-appropriate activities indicative of each category were provided along with space to record how many times per week the students took part in each type of exercise. Their answers for strenuous, moderate, and mild exercise were then multiplied by 9, 5, and 3 METs, respectively, as stipulated by Godin and Shephard (1985).

For the fourth GLTEQ question, participants responded to "In an average week, during your free time, how often do you do any physical activity long enough to make you sweat (make your heart beat quickly)?" by checking one of three boxes labeled "often," "sometimes," or "never/rarely."

Finally, for our fifth and last item, we asked, "Think about yesterday. How long did you participate in physical activity that made you breathe hard or feel tired?" Students responded to anchors of "Not at all" or "60 minutes or more." Five response options between these two anchors were available as follows: 10, 20, 30, 40, 50 minutes (Weston, Petosa, & Pate, 1997).

Cardiorespiratory Fitness (CF). Cardiorespiratory fitness was assessed with the Progressive Aerobic Cardiovascular Endurance Run (PACER) developed by the Cooper Institute for Aerobics Research (1987, 1999) for measuring children's cardiovascular fitness (i.e., an estimate of VO_2 max). The PACER has produced reliable and valid scores in children (Morrow, Jackson, Disch, & Mood, 2000). The PACER test has shown acceptable concurrent validity and criterion referenced validity with measured VO_2 max and estimated VO_2 max from the PACER test. Furthermore, equivalent reliability scores have indicated that most individuals were correctly classified for cardiorespiratory fitness using the PACER test (Plowman & Yan-Shu, 1999).

Procedures

After receiving permission from the university internal review board, we obtained permission from the school district and contacted the principals and physical education teachers. All 30 physical education teachers we contacted agreed to participate in the study and collected informed consent forms from each student. Two graduate students were trained to administer surveys and the PACER test. Upon arrival at each school, one data collector distributed pencils and all scales. One data collector read each question aloud to the students while the other one circulated among the students to help those having difficulty. Children often have difficulty remembering their physical activity involvement, so data collectors provided extensive directions for items constituting the assessment of MVPA (e.g., Sallis et al., 1996a).

Instruments were collected and checked by one data collector as the second one gave students instructions for the PACER test. Students were told we were interested in how long they could continue running, not how fast they could run, and a portion of the PACER compact disc was played to familiarize them with the

protocol. Cones were set out at the ends of the testing zone to alert students as to where to run and a short demonstration was given. One data collector and the teacher identified students as they completed the PACER test and announced the number of repetitions the students completed. The second data collector then recorded students' scores. Finally, students who had been identified as erroneously completing the self-report instrument (e.g., skipped a question or had unrealistic responses) were asked to clarify their answers before leaving the gym.

Data Analysis

We first screened the data for missing and incomplete data as well as outliers. Based on this screening, the data from 15 participants were eliminated prior to conducting the SEM analysis. SEM analyses were conducted with maximum likelihood estimation using AMOS 5.0 (Arbuckle, 2003) to evaluate the model. Maximum likelihood estimation is commonly used because it is robust even when data are not normally distributed (Chou & Bentler, 1995). Standard conditions were specified by having the appropriate indicators load on each latent factor; then we defined the scale of each latent factor by fixing the factor loading of one indicator for each latent variable to one. As specified by our model, direct paths were placed from attitude, subjective norm, and perceived behavioral control to intention, from intention to MVPA, and finally from MVPA to cardiorespiratory fitness. A direct path from perceived behavioral control to MVPA was also specified. Finally, attitude, subjective norm, and perceived behavioral control were free to correlate.

As recommended by Kline (1998), we examined a variety of model fit indexes to evaluate different aspects of model fit. Chi-square, an absolute fit index, was examined first. A nonsignificant chi-square statistic is unlikely (Kline, 1998) and a significant chi-square test is typically not used to reject a model. To account for sample size we examined the χ^2/df ratio.

We also examined absolute fit indexes: the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), and the Parsimony Goodness of Fit Index (PGFI). Values greater than .90 typically indicate a reasonable fit for the GFI and AGFI and values greater than .50 for the PGFI (Kline, 1998). We then examined incremental fit indexes: the Normed Fit Index (NFI), the Comparative Fit Index (CFI), the Relative Fit Index (RFI), Incremental Index of Fit (IFI), and the Tucker-Lewis index (TLI). Values close to .95 indicate a superior fit (Byrne, 2003). To address model parsimony we examined three parsimony ratios: PRATIO, PNFI, and PCFI. These ratios take into account model complexity relative to the NFI and CFI. Finally, we examined the Root Mean Square Error of Approximation (RMSEA) to assess fit based on the magnitude of the residuals. The RMSEA is often considered one of the most valuable fit indices in SEM.

Results

Means, standard deviations, and range of scores for all psychological variables, MVPA, and cardiorespiratory fitness are presented in Table 1.

Structural Equation Modeling

Measurement Model. Figure 2 presents factor indicators, underlying factors, standardized path coefficients, and residual path coefficients. Table 2 con-

Table 1 Means, Standard Deviations, and Ranges for All Variables in the Model

Variable	*M*	*SD*	Min–Max
Attitude	5.15	1.38	1.0–7.0
Subjective norm	28.51	10.43	2.25–49.0
Control	5.74	1.43	1.0–7.0
Behavioral intention	4.94	1.67	1.0–7.0
Moderate-vigorous physical activity	20.94	8.45	4–64.4
Cardiorespiratory fitness	30.17	16.50	4.0–96.0

Note: Cardiorespiratory fitness (PACER score).

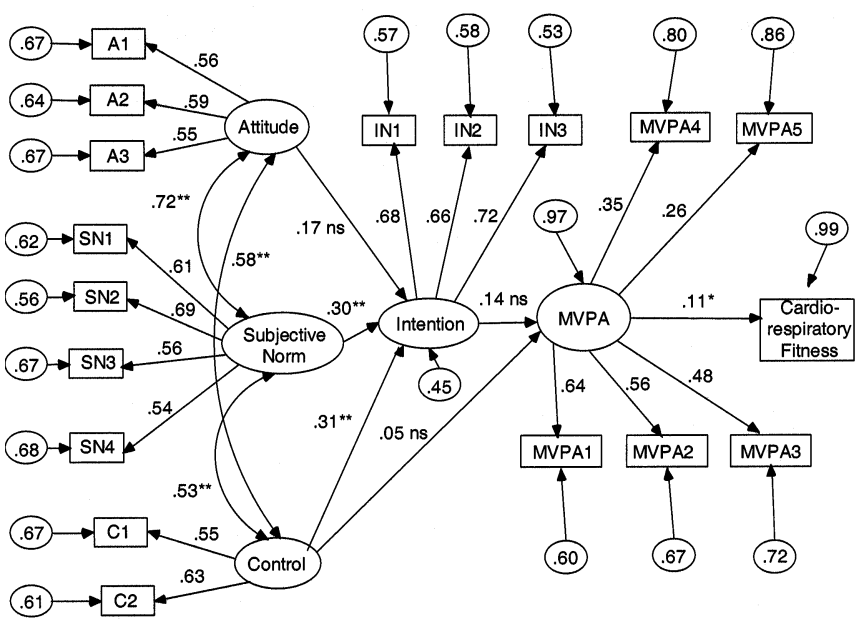

Figure 2 — Original structural model: Completely standardized solution, *$p < .01$; **$p < .001$.

tains the factor correlations. Results pertaining to the measurement model indicated that all items significantly ($p < .001$) loaded on their respective factors with critical ratios (CRs) greater than 2. The squared multiple correlations (SMC) of the standardized path coefficients indicate the amount of variance explained by each factor for its indicators. The range of variance explained for each variable was as follows: attitude (30–35%), subjective norm (29–48%), perceived behavioral control (30–40%), intention (44–52%), and MVPA (7–41%).

Table 2 Factor Correlations Among All Psychological Variables, MVPA, and Cardiorespiratory Fitness

	Atti-tude	Subj. norm	Control	Behav. intention	Mod-vigorous phys. activity
Subjective norm	.72				
Control	.58	.53			
Behavioral intention	.57	.59	.57		
Mod-vigorous phys. activity	.15	.17	.10	.15	
Cardiorespiratory fitness	.10	–.03	.00	–.02	.11

Note: Cardiorespiratory fitness (i.e., PACER score).

Original Structural Model. Figure 2 also presents the hypothesized structural model with the direct and indirect paths between the latent variables. The major purpose of the current study was to test the proposed structural model (see Figure 1). Results of all fit indexes indicated an acceptable fit of the model to the data χ^2 (df = 128, N = 548) = 224.45, $p < .001$; χ^2/df = 1.75, GFI = .96, AGFI = .94, PGFI = .72; NFI = .87, CFI = .94, RFI = .85, IFI = .94, TLI = .93, PRATIO = .84, PNFI = .73, PCFI = .79. The RMSEA value of .037 and 90% confidence interval (.029–.045) are also indicative of a good fit (Byrne, 2003; Kline, 1998).

As hypothesized, tests of the direct paths from subjective norm and perceived behavioral control to intention indicated that they were significant predictors of intention with CRs over 2 ($p < .01$). Contrary to our hypothesis, attitude was not a significant predictor of intention ($p = .17$, CR = 1.38). Similarly, the direct path from control to MVPA was not significant ($p = .65$, CR = .45). Finally, the direct path from intention to MVPA was not significant ($p = .15$, CR = 1.45), whereas the path from MVPA to cardiorespiratory fitness was significant at $p < .05$, with a CR of 2.04. The SMC or variance accounted for in cardiorespiratory fitness by MVPA, however, was only 1%.

Revised Structural Model.[2] Because attitude and intention were significantly correlated with subjective norm and control, and attitude did not predict intention in the original model, an alternative structural model was examined. In this alternative model we hypothesized that attitude's impact on intention was mediated by subjective norm and control. Therefore we specified direct paths from attitude to both subjective norm and control. Figure 3 presents the alternative model

[2] Two additional alternative models were also tested. First, because of the cross-sectional nature of our design it was plausible that cardiovascular fitness influenced MVPA directly, and through attitude, subjective norm and control. A model accommodating these paths was not a strong fit (e.g., χ^2/df = 2.77; CFI = .86). Second, a model identical to the above model but with the additional direct paths from attitude to both subjective norm and control was tested. This model fit (e.g., χ^2/df = 1.79; CFI = .94) but none of the paths from MVPA to attitude, subjective norm, and control were significant.

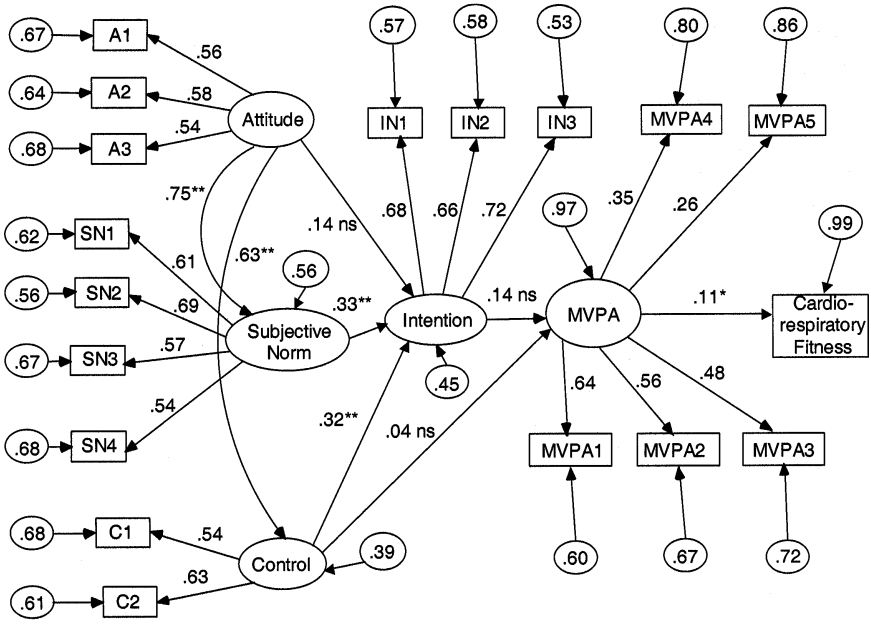

Figure 3 — Revised structural model: Completely standardized solution, *$p < .01$; **$p < .001$.

with the direct and indirect paths between the latent variables, standardized path coefficients, and residual path coefficients. Fit index results were virtually identical to the original model and indicated an acceptable fit of the model to the data χ^2 (df = 129, N = 548) = 226.99, $p < .001$, χ^2/df = 1.76, GFI = .96, AGFI = .94, PGFI = .72; NFI = .87, CFI = .94, RFI = .85, IFI = .94, TLI = .93, PRATIO = .84, PNFI = .73, PCFI = .79. The RMSEA value of .037 and 90% confidence interval (.029–.045) are also indicative of a good fit (Byrne, 2003; Kline, 1998).

The subjective norm and perceived behavioral control paths to intention indicated that they were significant predictors with CRs over 2 ($p < .01$). Similar to the original model, attitude was not a significant predictor of intention ($p = .36$, CR = .92), and the direct path from control to MVPA was not significant ($p = .69$, CR = .40). Again, similar to the original model, the direct path from intention to MVPA was not significant ($p = .13$, CR = 1.53), whereas the path from MVPA to cardiorespiratory fitness was significant at $p < .05$, with a CR of 2.04. The additional paths from attitude to subjective norm ($p = .001$, CR = 9.42) and from attitude to control ($p = .001$, CR = 7.16) were both significant and indicate that subjective norm and control mediated the impact of attitude on intention.

Discussion

The major purpose of this study was to test the ability of the Theory of Planned Behavior to predict MVPA and subsequently cardiorespiratory fitness. Overall indices of fit for both the original and revised models were almost identi-

cal and indicated that both models were adequate representations for the relationships within the data. The additional paths proposed in the revised model were significant and contributed to our ability to account for a substantial portion of the variance in intention. Therefore we focus our discussion on the results of the revised model.

An examination of the standardized path coefficients provides a more detailed evaluation of the model. Although Kline (1998) suggests that interpreting standardized path coefficients is difficult, he recommends using Cohen's (1988) guidelines to judge effect sizes. Using Cohen's criteria of .10, .30, and .50 for small, medium, and large effects, respectively, it is clear that most of the standardized path coefficients fell in the small to moderate range, with the strongest effects evident for the predictors of intention and the smallest effect evident for the association from MVPA to cardiorespiratory fitness.

The direct effect of a predictor variable on a dependent variable can also be understood based on the standardized path coefficient and how changes in a predictor variable would relate to increases or decreases in the dependent variable (Kline, 1998). For instance, the standardized path coefficient of .33 linking subjective norm to intention indicates that children's intentions to engage in MVPA would increase one-third of a *SD* for an increase of one *SD* in subjective norm, with no change in attitude or perceived behavioral control. Similarly, it would take a full *SD* increase in MVPA for cardiorespiratory fitness to increase .11 of a *SD*. The latter interpretation involving MVPA and cardiorespiratory fitness seems at first glance not particularly impressive. The public health benefits associated with increases in MVPA and cardiorespiratory fitness, however, would suggest caution in minimizing the impact of this particular finding.

Some of our strongest findings indicated that both attitude and subjective norm were predictive of intention. This result is supported by Motl et al. (2002), who examined the TPB with Black and White adolescent girls and found that attitude and subjective norm were also related to intention. Contrary to their research effort, we found that the impact of attitude on intention was mediated by subjective norm and control. The combined indirect effect of attitude on intention via subjective norm (25%) and control (20%) accounted for 45% of the variance in intention. This was a significant finding from the current study and suggests that African American children's positive attitudes toward MVPA need the support of significant others and must be accompanied by feelings of control in order to be translated into intentions.

Our finding that intention did not account for variance in physical activity is also similar to the findings of Motl et al. (2002), who also found no association between intention and physical activity. Also, contrary to TPB predictions and our hypothesis, the direct path from perceived behavioral control to MVPA was not significant.

Our finding that intention did not account for variance in MVPA is similar to previous research examining the TPB with children. For instance, Trost et al. (2002) found that intention accounted for only 3.3% of the variance in MVPA among 11-year-old children of which approximately half were African American. Theodorakis, Doganis, Bagiatis, and Gouthas (1991) found that intention accounted for 9% of the variance in physical activity behavior with children ages 10–11. Based on the current findings and related research with adolescents, it would appear that intention is not a particularly good predictor of physical activity behavior.

Unlike adults, children commonly lack the well-developed cognitive behavioral skills they can use to translate intentions into behavior. For instance, children lack experience in making decisions about being physically active (Hagger, Chatzisarantis, & Biddle, 2002). Furthermore, children in the current study lived in a large inner city where a variety of barriers likely hampered their ability to be physically active. For example, in urban settings parents may be concerned about their children's safety and may limit their opportunities to play and be active outside. Craig, Goldberg, and Dietz (1996) reported that children who believed they had access to safe places to engage in vigorous activity had stronger feelings of being in control of their participation compared to children who were more fearful. The findings from a recent study of children from a similar major Midwest city, Chicago, are also particularly relevant.

Molnar, Gortmaker, Bull, and Buka (2004) found that African American and Hispanic American children from neighborhoods with high levels of social and physical disorder (e.g., abandoned buildings, graffiti), and viewed as unsafe to play, were less active than children from safer neighborhoods with less disorder. In contrast, children from single-parent homes, many of which were African American, reported more exercise days per week compared to two-family homes, which was attributed to a lack of parental supervision (Lindquist et al., 1999). The complexity of determining PA influences of inner city African American children is illustrated by the additional finding that a lack of parental supervision may also have been responsible for greater rates of television viewing (Lindquist et al., 1999). Television viewing is linked to overweight and obesity in children, particularly African American girls (Sherwood, Story, & Obarzanek, 2004).

Cumulatively, the inability of intentions to reliably predict physical activity, combined with strong social and environmental influences on African American children's physical activity, suggests that future researchers should consider other predictors of MVPA such as children's efficacy (Hagger et al., 2002) to overcome social and environmental barriers to MVPA (Molnar et al., 2004). Examining the ways in which significant adults (i.e., caregivers) and peers support children's efforts to engage in MVPA would also seem to be a logical approach to understanding the antecedents of children's MVPA.

We only accounted for 1% of the variance in cardiovascular fitness. As many researchers have noted, children's ability to accurately recall physical activity is often poor, which may explain the low amount of variance between MVPA and cardiorespiratory fitness (Welk et al., 2000). Because a genetic component may account for 25% to 40% of children's cardiorespiratory fitness (Bouchard, Malina, & Perusse, 1997) the impact of MVPA on cardiorespiratory fitness is also reduced. Other researchers have also found weak to moderate associations between physical activity and fitness. For instance, Lindquist et al. (1999) indicated that fitness was weakly correlated with days per week of exercise but unrelated to hours per week of exercise. Similarly, Pate et al. (1990) accounted for 6% and 3% of the variance in fitness using parents' and teachers' global judgments of how physically active children were.

Finally, we did not measure MVPA prospectively as Ajzen (2004) specifies, therefore our measures of intention and MVPA lacked temporal correspondence. However, Rhodes and Plotnikoff (2005) offered evidence that measures of physical activity in cross-sectional designs are adequate proxy measures of future physical activity, suggesting that this design feature was not a serious limitation.

In summary, the major goal of our study was to test the ability of the TPB to predict MVPA and cardiorespiratory fitness with African American children. Based on our SEM analyses and commonly used fit indices, we found that our original hypothesized model and a revised model both adequately fit the data. The standardized path coefficients and effect sizes indicated that the strongest support was found for subjective norm and perceived behavioral control predicting intention, and for their mediating role in the attitude-intention link. The lack of a relationship from intention to MVPA suggests that future researchers should consider other predictors of MVPA. Finally, research on the determinants of MVPA in children from other minority groups (e.g., Arab American, Hispanic American) residing in inner city environments is lacking and therefore should be encouraged.

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