

## Expectancy-Value Model of Achievement Choice and Self-Reported Disruptive Behaviors of Elementary School Students

### İlköğretim Öğrencilerinin Başarı Seçimi Beklenti Değeri Modeli ve Sınıf-İçi Rahatsız Edici Davranışları

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#### Abstract

The purpose of this study is to examine the relationships among elementary school level boys and girls' expectancy beliefs, subjective task values, and their disruptive behaviors in a physical education program. One hundred and thirty one students (56 boys and 75 girls) in grades 3, 4, 5, and 6 completed questionnaires assessing their expectancy beliefs, subjective task values and self-reported disruptive behaviors. The result of this research revealed no gender differences for these variables. Results also indicated that there were no significant relationships between expectancy-value of achievement choice and students' disruptive behaviors for both gender. Because this study represents the first attempt to examine the relationships among expectancy beliefs, task values and student self-reported disruptive behaviors in a physical education/activity setting, more research is needed to confirm or refute this finding.

*Keywords:* Expectancy beliefs, subjective task values, student misbehaviors, elementary school

#### Öz

Bu çalışmanın amacı, ilköğretim okulu erkek ve kız öğrencilerinin "beklenti inançları", "özel görev değerleri" ve "sınıf-İçi rahatsız edici davranışları" arasındaki ilişkileri incelemektir. Araştırma, ilköğretim 3., 4., 5. ve 6. sınıflara devam eden 131 öğrenci (56 erkek ve 75 kız) ile yapılmış ve "beklenti inançları", "özel görev değerleri" ve "sınıf-İçi rahatsız edici davranışları" değerlendiren anketleri tamamlanmıştır. Bu çalışmanın sonunda erkek ve kız öğrenciler açısından bu değişkenlerde bir farklılık görülmemiştir. Her iki cinsiyet için "başarı seçimi beklenti değeri" ve "sınıf-İçi rahatsız edici davranışlar" arasındaki ilişkinin istatistik olarak önemi bulunmamasına rağmen, bu ilişkinin negatif bir ilişki olduğu tespit edilmiştir. Bu çalışma ilköğretim okulu erkek ve kız öğrencilerinin "beklenti inançları", "özel görev değerleri" ve "sınıf-İçi rahatsız edici davranışları" arasındaki ilişkiyi inceleyen ilk çalışma olduğu için gelecekte bu konu üzerinde aynı ya da farklı eğitim ortamlarında araştırmaların tekrar edilmesi gerekmektedir.

Sonuç olarak, bu çalışma, "beklenti inançları" ve "özel görev değerlerinin" öğrencilerin derslere katılımlarını etkileyen önemli belirleyiciler olduğunu belirtmektedir.

*Anahtar Sözcükler:* Beklenti inançları, özel görev değerleri, sınıf-İçi rahatsız edici davranışlar, ilköğretim okulu.

#### Introduction

Although school physical education programs have been recognized as the most logical and practical environments in promoting physical activity (Sallis & McKenzie, 1991; Xiang,

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McBride, & Solmon, 2003b), these programs often fails to meet the recommendation that children and adolescents participate in at least 60 minutes of moderately intense physical activity daily (Centers for Disease Control and Prevention [CDC], 2006). Fortunately, motivating children to be more physically active, after-school programs should be providing more structured and more productive physical activities. The effects of after-school programs on students' physical activity levels, however, depend largely on whether students are motivated to participate and to demonstrate engagement behaviors. Defined as the energization, direction, and regulation of behavior (Roberts, 2001), motivation affects student achievement behaviors such as activity choice, effort, persistence, and performance. To ensure successful participation and learning in after-school physical activity programs, teachers and researchers should know how to motivate students, what affects their motivation, and how motivational processes change.

Children's motivation in educational settings was mostly investigated by conducting self-efficacy (Bandura, 1997) and achievement goal theory (Ames, 1992; Duda, 1996; Dweck & Leggett, 1988; Nicholls, 1989). An expectancy-value model of achievement choice (Eccles, 1987; Eccles et al., 1983; Eccles, Adler, & Meece, 1984; Eccles, Wigfield, & Schiefele, 1998; Wigfield, 1994; Wigfield & Eccles, 1992), however, might represent one of other motivational theoretical frameworks for investigating children's motivation. Examining elementary school children's expectations and values using the expectancy-value model of achievement choice may provide a better perception about children's development of motivational values and expectancy (Xiang, McBride, Guan, & Solmon, 2003a).

*Expectancy-value model of achievement choice*

Researchers (Atkinson, 1957; Eccles et al., 1983; Wigfield, 1994; Wigfield & Eccles, 1992) in this tradition argue that individuals' choice, persistence, and performance can be explained by their beliefs about how well they will do on the activity (expectancy-related beliefs) and the extent to which they value the activity (subjective task values). Eccles and her colleagues (Eccles et al., 1983; Eccles & Wigfield, 1995; Wigfield & Eccles, 1994) proposed that expectancy-related beliefs consists of both beliefs about ability and expectancies for success. While beliefs of ability refer to children's evaluation of their ability in different achievement tasks, expectancies for success refer to children's sense of how well they will do on an upcoming task. Sometimes expectancy for success and self efficacy can be mixed. While expectancy for success refers to performance expectations, and relates specifically to task performance, self-efficacy, is a self-appraisal of one's ability to accomplish a task and one's confidence in possessing the skills needed to perform that task (Garcia et al., 1991). Expectancy-value research demonstrates that both beliefs about ability and expectancies for success play a fundamental role in achievement motivation and influence behavior and learning (Bandura, 1986; Covington, 1984; Eccles et al., 1983).

Eccles et al. (1983) identified four major components of subjective task values that can influence achievement motivation: (a) attainment value or importance, (b) intrinsic value or interest, (c) utility value or usefulness, (d) cost. They defined attainment value as the importance of doing well on the task in terms of their self-image and core personal values. Intrinsic value refers the enjoyment one gains from doing the task. Utility value refers to perceived usefulness of task in life. Cost refers to how the decision to engage in one activity limits access to other activities (Wigfield & Eccles, 2000). Cost includes loss of time and energy for other choices (Xiang et al., 2003a). However, this component is not examined in the present investigation.

Notably, expectancy-value model proposes that when students believe that they are good at learning tasks (i.e, expectancy beliefs) and see what they are doing in the classroom as important, useful, and interesting (i.e, task values), they are more likely to demonstrate high levels of engagement in learning. Xiang, McBride, and Bruene (2004), for example, found that expectancy-related beliefs and subjective task values were predictors of children's intentions for future participation in physical education and in running.

Research indicates that gender differences occurred in children's expectancy-related beliefs and subjective task values. A number of researchers (Meece & Courtney, 1992; Satina, Solmon, Cothran, Loftus, & Stockin-Davidson, 1998; Wigfield et al., 1997; Wright, 1997) reported that girls have lower ability beliefs and expectancies for success, even if they performed as well as or better than boys. Wigfield et al. (1997), however, reported that children's expectancy-related beliefs and subjective task values can be depended on their gender type in the elementary school years. Wigfield et al. (1997) found that boys' expectancy-related beliefs were higher than girls' for math and sports, while girls' expectancy-related beliefs were higher than boys' for reading and instrumental music. In physical education settings, boys have higher expectations for success than girls mainly due to a gendered learning context that is perceived to be male dominant (Satina et al., 1998; Wright, 1997; Xiang et al., 2003a). The participants in those studies, however, were mostly Caucasian students. Little information is available concerning the application of the expectancy-value model to minority students in physical education/physical activity settings.

#### *Students' disruptive behaviors*

Several studies have been performed to examine the relationship between the expectancy-value model and other motivational theories. They showed distinct results. For instance, while Xiang and her colleagues (2004) found that fourth graders' expectancy-related beliefs and/or importance made significant contributions to the prediction of their 1-mile running performance, Chen, Martin, Ennis, and Sun (2006) showed that none of the constructs of this model (i.e., expectancy beliefs and task values) predicted learning outcomes and average in-class physical activity. It is apparent that because of this contrast in the available empirical studies, more research is needed by examining the expectancy-value model with other learning outcomes. Students' disruptive behaviors represent one of these learning outcomes.

Disruptive behavior, sometimes called troublesome or misbehavior (McCormack, 1997; O'Hagan & Edmunds, 1982) has always been one of the most serious concerns of schools. This type of behavior disrupts not only teachers but also the learning focus of students (Fernandez-Balboa, 1991). It also interferes with a positive classroom climate, as well as students social interactions, and may create an atmosphere that reduces student participation (Doyle, 1986; Kounin, 1970).

Research indicates that disruptive behavior mostly occurs because of inappropriate curriculum and teaching strategies, teacher's inability to meet the diverse needs of all students such as class size, limited planning time, cultural and linguistic barriers, lack of access to equipment and materials, poor organization, mismatch between teaching style and the learning styles of students, the student's emotional and behavioral disorders, the physical arrangement of the classroom, boredom or frustration, and transitional periods (Belka, 1991; Fink & Siedentop, 1989; O'Sullivan & Dyson, 1994; Tinning, 1987). Additionally, more disruptive behaviors can be seen in physical education programs because of lack of control of students in a large area of gym (Rimmer, 1989).

Because of the effects of student disruptive behaviors on the ability of teachers to manage classes and successful teaching, numerous researchers have conducted research on student disruptive behaviors in the classroom and physical education (Anderson & Prawat, 1983; Cothran & Kulinna, 2007; Doyle, 1990; Kaplan, Gheen, & Midgley, 2002; Kaplan & Maehr, 1999; Kulinna, Cothran, & Regualos, 2003; Supaporn, Dodds, & Griffin, 2003). Supaporn et al. (2003), for example, examined how the classroom ecology and program of action influence teacher's and students' understanding of misbehavior in a middle school physical education setting. In their study, most misbehavior that students described were related with classroom rules, routines, and teacher expectations and were reported as interfering with instructional or managerial tasks. For example, verbal misbehaviors included talking, yelling, criticizing peers, using inappropriate language, and arguing with the teacher whereas physical misbehaviors included wandering or fooling around, walking on bleachers, using equipment inappropriately, leaving the gym, pushing, kicking, and fighting. Recently, Kulinna et al. (2003) developed the "Physical Education Classroom Management Instrument" (PECMI) to measure students' disruptive behaviors in six categories:

(1) aggressive (e.g., “bullying”), (2) low engagement or irresponsibility (e.g., “doesn’t participate”), (3) fails to follow directions (e.g., “doesn’t line up right”), (4) illegal or harmful use of substances (e.g., “drug use”), (5) distracts or disturbs others (e.g., “giggling”), and (6) poor self-management (e.g., “late assignments”).

To reduce disruptive behaviors, most researchers (e.g., Frith & Armstrong, 1986; McCarl, Svobodny, & Beare, 1991; Nelson, Smith, Young, & Dodd, 1991; Prater, Joy, Chilman, Temple, & Miller, 1991) have used behaviorist approaches such as self-management training, positive reinforcement, and self-monitoring as effective methods. These behaviorist approaches, however, are not adequate to effectively deal with disruptive students (Kaplan et al., 2002; Kaplan & Maehr, 1999). As a result, there is a need to explore other approaches to the study of student disruptive behaviors.

Kaplan and Maehr (1999) proposed that motivational theories could be used to examine students’ disruptive behaviors. In physical education settings, however, only a few research examined the relationship between student motivation and their disruptive behaviors. For example, Papaioannou (1998) has found that reasons for being disciplined in physical education relate to goal orientations. A mastery orientation was associated with intrinsic reasons, caring, responsibility, and introjected reasons for being disciplined during participation in physical education classes. A performance orientation was positively related to extrinsic reasons and to no reasons for being disciplined. Overall, high-mastery-oriented individuals perceived themselves as more disciplined than low-mastery-oriented students, and this was linked to their reasons for being disciplined. Notably, Kaplan and Maehr (1999) and Papaioannou (1998) examined the relationship between disruptive behaviors and achievement goal theory as a viable theoretical perspective to the study of students’ disruptive behaviors. Recently, Agbuga, Xiang and McBride (2010) found that mastery goals are related to less disruptive behaviors than performance goals in physical education settings.

Nevertheless, research on students’ motivation within other motivational approaches such as an expectancy-value model of achievement choice has not been linked with the study of students’ disruptive behavior in education settings. Therefore, the present study offers expectancy-value model of achievement choice as a theoretical framework for investigating the students’ disruptive behavior in an after-school physical education setting. Such inquiry may provide practical information to reveal constructs of value in at-risk elementary school minority students and how these values and expectancies interact to their disruptive behaviors. Such inquiry may also provide important implications for teachers who want to design physical education programs where students’ disruptive behaviors will be minimized and therefore their learning can be maximized.

As a result, this study attempted to use the expectancy-value model of achievement choice as a theoretical framework to examine relationships among students’ motivation and their self-reported disruptive behaviors in an after-school physical education program. Specifically, the following research questions were addressed: (a) What is the relationship between children’s expectancy-related beliefs, subjective task values, and disruptive behaviors? (b) What gender differences occur between children’s expectancy-value model of achievement goals and disruptive behaviors?

## Methods

### *The Setting and Participants*

This study was performed in a federally funded 21<sup>st</sup> Century Community Learning Centers’ (21st CCLC) after-school program serving mostly African-American and Hispanic-American students in grades 3-6. The purpose of this program is to create community learning centers that provide academic enrichment opportunities for children, particularly minority students who are in low socio-economic level, to meet State and local student standards in core academic subjects

meet such as reading and mathematics, to offer students high-quality enrichment activities that can match their regular academic programs, and to offer literacy and related educational services to the families of participating students (Bhanpuri, 2005). The 21st CCLC after-school program consisted of five program areas for students: reading, science, math, physical activity, and enrichment. The after-school program ran from 3:00 p.m. and ended at 6:00 p.m. Mondays to Thursdays for the regular school year. Participants rotated through the five program areas every 30 minutes. Class size typically ranged from 20 to 30 students.

The focus of the physical activity program within this 21st CCLC program was to provide students opportunities to engage in maximum amounts of enjoyable moderate-to-vigorous physical activity (MVPA), to develop positive attitudes toward physical activity, and to learn about physically active and healthy lifestyles. To this end, the Coordinated Approach to Child Health (CATCH) was adopted as a curricular program. The CATCH is a developmentally appropriate physical activity program that promotes healthy food choices, health related fitness, skill competency, and cognitive understandings about the importance of physical activity among children (Luepker, Perry, McKinlay, Nader, Parcel, & Stone et al., 1996). Aerobic games, sports, jumping rope, parachute activities, and muscular strength games are major components of the CATCH program.

After-school physical education classes were taught by two experienced physical education specialists who were trained to employ numerous techniques to maximize the amount of time students spend in activities during the physical activity class. Physical education specialists, specifically, received a 2-hr training session before implementing the lessons and a 10-min booster training prior to starting each lesson. The following training objectives were applied: (a) Aware of the lesson objectives; (b) assess the CATCH curricula; and (d) promote students' participation in physical activity; and (e) develop teachers' organizational, management, and instructional skills.

Participants included 131 (56 boys and 75 girls,  $M$  age = 10.55,  $SD$  = 1.29,  $M$  age = 10.30,  $SD$  = 1.10, respectively) students in grades 3-6 enrolled in the federally funded after-school program in a rural school district located in south-central Texas. Participants came from a public elementary school within the district. They came from lower middle class backgrounds and represent a range of ethnic groups: 4.4% Caucasians, 64.4 % African American, and 31.1% Hispanic. The student population of the school district consisted of children from families of lower to middle SES. Approximately 90% of the students in the school were eligible for free or reduced lunch. They were voluntary to come to after-school physical education programs after regular school time. Permission to participate in the study was received from the institution, children, and their parents.

### *Design Methodology*

A survey-based descriptive research design was used. The students completed to a two-part questionnaire. The first part consisted of demographic information including age, grade, gender, and school. The second part assessed their expectancy beliefs, task values and disruptive behaviors in the after-school physical education classes.

*Expectancy-value model scale.* Eleven items were modified from questionnaires developed and used by Eccles and her colleagues (Eccles et al., 1983; Eccles, Wigfield, Harold, & Blumenfeld, 1993) and Xiang et al. (2003a). The items were originally based on a 7-point scale. However, in the present study, we used Xiang and her colleagues' 5-point scale system. In Eccles and her colleagues studies (e.g., Eccles et al., 1983; Eccles, Adler, & Meece, 1984), the participants were high school students. The participants, however, were second- and fourth-grade students in their physical education classes in Xiang et al. (2003a) study. Xiang et al (2003a) took the following steps to preserve the validity and reliability of these measures in elementary physical education. First, they consulted with a panel of five knowledgeable professionals about the questionnaire items prior to data collection. The panel consisted of one expert in children's reading, two school district physical education coordinators, and two elementary physical education teachers. The

panel members were asked to examine the appropriateness of literacy level and measurement scale of the items for children in second and fourth grade. Based on their suggestions, Xiang et al. (2003a) rewrote several items and reduced the 7-point scale to a 5-point scale. They concluded that a 5-point scale is valid and reliable. The five questions addressed expectancy-related beliefs including beliefs about ability and expectancies for success in the after-school physical education program. Examples of each scale: (a) Beliefs about ability: Elementary school children were asked to rate their general ability in after school physical education. They were asked, "How good are you at activities and games in after school physical education (ASPE)?" (1 = very bad, 5 = very good), "If you were to list all the students in your ASPE class from worst to the best, where would you put yourself?" (1 = one of the worst, 5 = one of the best), "Some kids are better in one subject than in another. For example, you might be better in mathematics than in reading. Compared to most of your other school subjects, how good are you at activities and games in ASPE? (1 = a lot worse in ASPE, 5 = a lot better in ASPE), (b) Expectancies for success. The children were asked two questions to assess expectancies for success based on 5-point scales. For example, they were asked, "How well do you think you will learn activities and games in ASPE this year?" (1 = not at all well, 5 = very well), and "How good would you be at learning something new in ASPE?" (1 = very bad, 5 = very well). The Cronbach alpha coefficient of this scale was .75. The six questions addressed subjective task values including attainment value or importance, intrinsic or interest value, and utility value or usefulness in the after-school physical education program. Examples of each scale: (a) Attainment value or importance. Two questions assessed this construct. For example, the children were asked, "For me, being good at activities and games in ASPE is...?" (1 = not very important, 5 = very important), and "Compared to your other school subjects, how important is it to you be good at activities and games in ASPE?" (1 = not very important, 5 = very important), (b) Intrinsic or interest value. Two questions were used to assess this construct using 5-point scales. The children were first asked, "In general, I find new activities and games in ASPE are..." (1 = "way" boring, 5 = "way" fun), and then they were asked, "How much do you like activities and games in ASPE? (1 = don't like it at all, 5 = like it very much), (c) Utility value or usefulness. Two questions were used to assess this construct. The children were asked, "Some things that you learn in school help you do things better outside of class. We call this being useful. For example, learning about plants might help you grow a garden. In general, how useful is what you learn in ASPE?" (1 = not useful at all, 5 = very useful), and "Compared to your other school subjects, how useful is what you learn in ASPE? (1 = not useful at all, 5 = very useful). The Cronbach alpha coefficient of this scale was .74.

*Self-reported disruptive behaviors.* Students' self-reported disruptive behaviors were assessed using an adaptation of the PECMI (Kulinna et al, 2003). The PECMI is a questionnaire to examine students' reports of the type and frequency of various student behaviors in physical education classes that might disrupt classroom management (Kulinna et al, 2003). The PECMI consists of six categories of disruptive behaviors (aggressive, disturbing others, failing to follow directions, low engagement or irresponsibility, illegal or harmful, and poor self-management) and asks students to rate how often each of the six disruptive behaviors occurs in their physical education class on a 1 (never) to 5 (always) scale. For the present study, only disturbing others, failing to follow directions, and low engagement or irresponsibility (low engagement was used as the term throughout the paper) were included because the remaining three categories of disruptive behaviors seldom occurred among the participants in this study. This assessment is based on the lead teacher's two-year observation of the physical activity program. The revised instrument consisted of 14 items, requiring students to indicate whether they displayed disruptive behaviors in class on 5-point Likert-type scale, ranging from 1 (not like me) through 5 (very much like me). The Cronbach's alpha values for the three scales were .74, .79, and .75, respectively, indicating acceptable internal consistency.

#### *Procedures*

Data were collected during the spring semester of 2006. The questionnaires were administered by the researchers to students during regularly scheduled after-school physical

education classes. To ensure the independence of students' responses, the leading researcher had students spread out so that they could not see one another's responses. Each item was read aloud to the students. They were encouraged to answer as truthfully as they could and to ask questions if they had difficulty understanding instructions or items in the questionnaire. The students raised no questions while completing the questionnaires. Administering the questionnaire took approximately 30 minutes.

#### *Data analysis*

Four steps were taken. First, exploratory factor analysis was conducted to examine the students' self-reported disruptive behaviors measures. Then, descriptive statistics were performed to investigate mean and standard deviation of each variable. Then independent-sample *t* tests were performed to test significant differences between two expectancy-value of achievement choice (i.e., expectancy-related beliefs and subjective task values) and disruptive behaviors reported by both gender. Additionally, Pearson product-moment correlations were calculated to identify significant relationships among expectancy-related beliefs, subjective task values, and students' disruptive behaviors in the after-school physical education program. Finally, multiple regressions were performed to assess the relative contribution of expectancy-related beliefs and subjective task values to students' self reported disruptive behaviors.

### Results

#### *Exploratory Factor analyses*

Exploratory factor analysis was conducted to examine the construct validity of students' self-reported disruptive behavior measures. Specifically, students' self-reported disruptive behaviors exploratory factor analysis revealed no items failed to load on their factor (see Table1). The factor accounted for 47.10% of the variable variance. The scale demonstrated acceptable internal consistency (Cronbach's  $\alpha = .91$ ).

Table 1.

#### *Factor Analysis on Self-Reported Disruptive Behavior*

Disruptive Behavior Items	Factor 1
1. I sometimes giggle with my friends while my coaches are talking	.52
2. I sometimes do not participate	.48
3. I sometimes talk with my friends while my coaches are talking	.63
4. I sometimes can't sit still	.51
5. I sometimes do not pay attention to the coaches	.73
6. I sometimes do not follow my coaches' directions	.75
7. I sometimes do not line up right	.72
8. I sometimes do not take care of equipment	.61
9. I sometimes leave the group during activity	.72
10. I sometimes make fun of other students	.74
11. I sometimes move slowly on purpose	.80
12. I sometimes quit what I am supposed to do	.61
13. I 13. I sometimes pretend to be sick so that I would not participate in class	.56
14. I sometimes keep others from working	.72

*Descriptive and Independent-Sample T Tests*

In general, both boys and girls reported positive expectancy-related beliefs ( $M = 4.09, SD = .58$  and  $M = 4.20, SD = .54$ , respectively) and subjective task values ( $M = 4.22, SD = .61$  and  $M = 4.26, SD = .54$ , respectively) about after-school physical education, and displayed low levels of disruptive behaviors ( $M = 2.52, SD = 1.04$  and  $M = 2.36, SD = .96$ , respectively) (see Table 2). The mean scores of the positive expectancy-related beliefs and subjective task values of both genders were all above the midpoint (i.e., 3) of the scales, suggesting students in this study felt positive feelings in the after-school physical education classes. The mean scores of disruptive behaviors were just below the midpoint of the scales (i.e., 3) suggesting both boys and girls felt that these disruptive behaviors were sort of like them in the after-school physical education classes. Results of independent-sample  $t$  tests indicated that boys and girls were not significantly different from each other for their expectancy-related beliefs, subjective task values, and disruptive behaviors [ $t(129) = .920, p = .359, t(129) = -1.082, p = .281$ , and  $t(129) = -.334, p = .739$ , respectively.]

*Correlation Analyses*

As shown in Table 2, Pearson product-moment correlations indicated that expectancy-related beliefs were positively related to subjective task values of after-school physical education programs for total sample and both gender ( $p < .001$ ). Correlations also indicated both expectancy beliefs and subjective task values were not significantly related to students' self-reported disruptive behaviors for both gender (see Table 2).

*Hierarchical Multiple Regression Analyses*

As seen in Table 3, multiple regression analyses found that neither expectancy beliefs ( $\beta = -.192, p = .241$  for boys and  $\beta = .244, p = .072$  for girls) nor subjective task values ( $\beta = .046, p = .776$  for boys and  $\beta = -.240, p = .076$  for girls) predicted their self-reported disruptive behaviors. The two expectancy-value achievement choice predictors explained %3 of the variance in students' self-reported disruptive behaviors for boys and 6% for girls, respectively.

Table 2.

*Descriptive Data and Correlations for Expectancy-value and Disruptive scores*

	<i>M</i>	<i>SD</i>	Expectancy-related beliefs	Subjective task values	Disruptive behaviors
<b>Total sample</b>					
Expectancy-related beliefs	4,16	,56	-	.530*	-.020
Subjective task values	4,25	,57		-	-.090
Disruptive behaviors	2,43	,99			-
<b>Boys</b>					
Expectancy-related beliefs	4.09	.58	-	.545*	-.166
Subjective task values	4.22	.61		-	-.058
Disruptive behaviors	2.52	1.04			-
<b>Girls</b>					
Expectancy-related beliefs	4.20	.54	-	.516*	.120
Subjective task values	4.26	.54		-	-.114
Disruptive behaviors	2.36	.96			-

\* $p < 0.01$  (2-tailed).

\*\* $p < 0.05$  (2-tailed).



Table 3.

*Results of Stepwise Multiple Regressions on Students' Self-reported Disruptive Behavior*

Predictor	<i>b</i>	$\beta$	$R^2$ (Cumulative)	<i>t</i> Value
Total sample				
Expectancy-related beliefs	.068	.038	.010	.369
Subjective task values	-.192	-.110	.019	-1.059
Boys				
Expectancy-related beliefs	-.345	-.192	.028	-1.187
Subjective task values	.079	.046	.030	.286
Girls				
Expectancy-related beliefs	.429	.244	.014	1.828
Subjective task values	-.426	-.240	.061	-1.799

Note.-*b* values are unstandardized regression coefficients from the final stage of the regression analysis.  $R^2$  values are cumulative. With each incremental step adding to the variance explained.

### Discussion

While the expectancy-value model of achievement choice has been applied comprehensively in the education settings, little is known about its utilization and relations to educational outcomes in physical education settings, particularly in after-school physical education programs. Guided by expectancy-value model of achievement choice, this study examined at-risk minority school students' expectancy beliefs, subjective task values and their relations to their self-reported disruptive behaviors in an elementary after-school physical education program.

The result of this research revealed no gender differences for expectancy-related beliefs and subjective task values. Although some recent studies that found that elementary school boys and girls did not differ in task values toward physical education and a running program (Xiang et al., 2003a; Xiang, McBride, & Bruene, 2006), the current finding is not consistent with most previous research that reported girls have lower ability beliefs and expectancies for success, even if they performed as well as or better than boys (Meece & Courtney, 1992; Satina et al., 1998; Wigfield et al., 1997; Wright, 1997). One possible explanation for the inconsistency could be that both boys and girls in this study might see their physical activity classes as a fun learning time, not evaluating their skills as a grade because of after-school physical activity classes' voluntary setting. Additional research is needed to determine whether voluntary participation would affect both genders' expectancy beliefs and task values than nonvoluntary participation in physical education settings. Another possible explanation could be that the participants in previous studies were mostly Caucasian students. The participants in the current study, however, were at-risk minority students. It is known that little information is available concerning the application of the expectancy-value model to minority students in physical education/physical activity settings. At-risk minority students' perception about their after-school physical education program can be different than socio-economical developed Caucasian ones. A third possible explanation is that the perceived racial and gender appropriateness of the activities or tasks could impact individual's expectancy beliefs and values toward an activity (Guan, 2007). Previous studies indicate that different racial and gender groups might exhibit different perceptions of appropriateness of particular sports and physical activities (Goldsmith, 2003; Harrison & Belcher, 2006; Solmon, Lee, Belcher, Harrison, & Wells, 2003). Football, basketball and track sprinting, for example, are regarded as more appropriate for African-Americans whereas golf and hockey are considered more appropriate for the Caucasian Americans (Harrison & Belcher, 2006). In the current after-school physical activity program, at-risk minority students performed mostly racial appropriateness sports such as football, basketball, and track sprinting. Therefore, both genders in the current study might see

their physical activities as racial and gender appropriate.

The current study revealed a significant relation between both genders' expectancy-related beliefs and subjective task values in the after-school physical activity program. This result is consistent with previous studies (Berndt & Miller, 1990; Eccles & Wigfield, 1995; Xiang et al., 2003a) which states young children have higher expectancy-related beliefs and task values. Xiang et al. (2003a), for example, found a positive association between expectancy-related beliefs and task values among elementary school children in a physical education setting. The results of the current study provide further empirical evidence supporting this theoretical connection. The present study also suggest that at-risk minority children tend to value activities when they have positive beliefs and high expectancies for success in after-school physical activity classes.

Disruptive behaviors were reported by this group of students in their after-school physical activity classes. However, the mean scores of those behaviors were just below the midpoint of the scales. This result might be an indicator that students' disruptive behaviors may be moderated in this after-school physical education program.

The current study also examined at-risk minority students' expectancy-related beliefs, task values and their relations to disruptive behaviors in an after-school physical education program. Results of both correlation and hierarchical multiple regression analyses revealed no significant relationships among expectancy beliefs, subjective task values, and students' self-reported disruptive behaviors were found for both genders and neither of them predicted both genders' self-reported disruptive behaviors. That there were no significant relationships among these variables may indicate that for these students the two constructs (expectancy beliefs and subjective task values) had no impact on their disruptive behaviors in the after-school physical education program. The finding may imply that for this group of students, they disrupted the class not because they did not consider learning important, useful, and interesting. However, this finding is unexpected, as the expectancy-value model of achievement choice proposes that students who believe that they value learning are more likely to demonstrate high levels of engagement in learning. Xiang et al. (2004), for example, found that expectancy-related beliefs and subjective task values were significant predictors of children's intentions for future participation in learning.

In conclusion, this study represents the first attempt to apply the expectancy-value model of achievement choice to an after-school physical education program with elementary school children. Results provide empirical support for the utility of the expectancy-value model of achievement choice in the context of an after-school physical education program. They also revealed students reported higher expectancy-related beliefs and subjective task values. However, young students tend to use only endpoints of the Likert scale, therefore mean scores are generally found to be high for young students. This is one of the limitations of relying on self-report data. Additionally, this study is one of very few in the domain of physical education/activity that have attempted to apply the expectancy-value model of achievement choice to study students' disruptive behaviors in an after-school physical education program.

Because this study represents the first attempt to examine relationships among expectancy beliefs, task values and student self-reported disruptive behaviors in a physical education/activity setting, more research is needed to confirm or refute this finding. Future research efforts are also recommended to replicate this study with different grade levels of students such as secondary school children. Additionally, more research might be done by splitting the children into the two different disruptive groups (i.e., less disruptive students group and more disruptive students group). Though analyses of data revealed no significant relations between expectancy-related beliefs, subjective task values and disruptive behaviors, results provide a support for the importance of going beyond self-report data in the examination of student behaviors in physical education. Future research, therefore, need to use observation data to examine this relationship in an after-school physical activity setting. If a negative link establish between expectancy-value model of achievement choice and students' self-reported disruptive behaviors in the future research, this model might be applied to reduce misbehaviors and elevate student participation and learning.

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