

EXAMINING PHYSICAL SELF-PERCEPTIONS AND PHYSICAL ACTIVITY OF JAMAICAN YOUTHS: A CULTURAL EXTENSION OF THE PSPP

LEAPETSWE MALETE¹, PHILIP SULLIVAN², AND BRIGITTE K. MATTHIES³

¹*International Education & Partnerships, University of Botswana*

²*Department of Physical Education & Kinesiology, Brock University, Ontario, Canada*

³*Department of Psychology, California State University, Los Angeles, USA*

ABSTRACT

This study examined the relationship between physical self-perception and the involvement of Jamaican youths in sport and physical activity. A sample of 1052 high school students aged between 12 and 19 years completed a Background Information Questionnaire and the Physical Self-Perception Profile. Participants were involved in competitive sport and recreational physical activities, or were non-participants in sport. Results revealed that the 5-factor structure of the PSPP as proposed by Fox and Corbin (1989) was not appropriate for the data obtained. A three-factor model based on the original PSPP items was proposed, consisting of the factors of Physical Self-Worth, Physical Appearance, and Physical Competence. Significant differences between different levels of sport participation on the three factors were found amongst these factors. Practical implications and proposal for further investigation of physical self-concept measures in this culture are made.

Key words: physical self-perception; youth sport; cultural extension

Enhancing the participation of youth in sport and physical activity requires an understanding of the psychosocial determinants of their involvement in these activities. This becomes even more critical when viewed in the context of the decline in participation in physical activity during adolescent years as well as the alarming increase in the incidence of obesity across the life span (Elgar, Roberts, Moore & Tudor-Smith, 2005; Janssen, Katzmarzyk, Boyce, King, & Pickett, 2004). The global increases in incidence of overweight and obesity among children, youth, and adults and their related health conditions have made it imperative for nations to include physical activity among the strategies for health promotion and disease prevention (Centers for Disease Control and Prevention, 1999). Childhood obesity is expected to soar worldwide, with recent reports

suggesting that 46.4 percent of children in North and South America will be overweight by 2010 (James, 2006). A commitment to the promotion of physical activity compels researchers and practitioners to have a better understanding of psychological correlates of engagement in physical activity or adoption of an active lifestyle across all ages. This explains the continued interest of researchers in the role played by constructs such as physical self-perception on youths' exercise behaviors.

Physical self-perception has been defined as a multidimensional construct denoting self-referent statements about the physical self as it relates to body image, body esteem, and perceived ability (Fox, 1990). The nature and impact of physical self-perceptions on exercise behaviors of children and adolescents have attracted the attention of many researchers over the past decade (Fox, 1990; Marsh, 1993; Ransdell, Detling, Taylor, Reel, & Shultz, 2004; Welk & Eklund, 2005). This interest in the study of physical self-perceptions was stimulated by an increasing recognition of the role of self-concept on human behavior and general well-being (Biddle, Sallis, & Cavill, 1998; Harter, 1990; Fox & Corbin, 1989; Marsh, 1993; Smith, 1986). Research has demonstrated significant associations between physical self-perceptions and a number of outcomes, such as choice of physical activity and other health-related behaviors as well as psychological health (Fox, 2000; Fox, & Corbin, 1989; Sallis, Prochaska & Taylor, 2000).

Different measurement models of physical self-concept have been proposed, including the Physical Self-Perception Profile (PSPP) (Fox and Corbin, 1989; Fox, 1990) and the Physical Self-Description Questionnaire (PSDQ) (Marsh, Richards, Johnson, Roche, & Tremayne, 1994). These models have been widely tested among youth populations in Australia, Canada, Europe, and the United States (Biddle & Wang; 2003; Crocker, Eklund, & Kowalski, 2000; Welk & Eklund, 2005). Findings from these and numerous other studies not only supported the construct validity of the scales and models but also demonstrated that indeed physical self-perception is an important construct in explaining a variety of health-related behaviors and outcomes.

The PSPP has been widely used in the study of exercise behaviors of children and adolescents. It consists of 4 sub-domain scales of perceived sport competence, physical strength, physical condition, and body attractiveness and 1 domain scale of physical self-worth (Fox & Corbin, 1989). The content and factorial validity of the PSPP was first carried out with a sample of college students in the United States (Fox & Corbin, 1989). The psychometric properties of the scale as well as its cross-cultural validity have been confirmed with other populations in Canada and Europe (Asci, Asci & Zorba, 1999; Crocker et al., 2000). Some modifications to the scale have been made for use with younger populations (Whitehead, 1995). These studies suggest that there is value in the utility of the PSPP to explain health-related behaviors across cultures.

Significant relationships have also been established between exercise behaviors and various domains of the PSPP (Fox 1997; Raudsepp, Liblik & Hannus, 2002). More physically active children have been found to have higher perceptions of sport competence and strength compared to less or non-physically active children (Biddle & Armstrong, 1992; Crocker et al. 2000). Gender differences on the PSPP have also been identified.

Scores on the sub-domains of the PSPP have been found to be higher among males compared to females (Fox, 1990). This was confirmed in a more recent study by Welk and Eklund (2005). However, there were no significant gender differences on body attractiveness. Other findings demonstrated that active girls were characterized by higher scores on perception of attractive body as well as physical self-worth and global self-esteem as compared to less active girls, but this was not true for boys (Biddle & Armstrong, 1992). Similarly, Douthitt (1994) found that perceived global self-worth and perceived physical appearance were predictive of female but not male exercise adherence. Thus it would seem the importance of the different domains of the PSPP varies by gender.

Although much research on the PSPP has been conducted in Australia, North America, and Europe, little is known about the appropriateness of this construct and its applicability to explaining health-related behaviors in less developed countries. Specifically, the applicability of the PSPP in explaining physical activity patterns and other outcomes among Jamaican youths is not known. It is expected that the proposed PSPP model will be applicable to Jamaica based on the widely accepted but empirically established notion that the self is a universal trait as opposed to a culture-specific trait (Church & Lonner, 1998; Yeung & Lee, 1999). However, this line of reasoning does not suggest that cultural extensions of models on self-concept and self-esteem should simply be assumed. Hence the need for more studies that test the generalizability and factor structure of models normed predominantly among North American and Western European populations.

Therefore, the purpose of the present study was to examine whether the previously determined factor structure of the PSPP would be supported by data from Jamaican youths. The study also sought to examine if physical self-perceptions of Jamaican youths are related to their levels of participation in sport and physical activity. It was hypothesized that the current data from Jamaican youths would support the factor structure of the PSPP. It was further hypothesized that Jamaican youths who participate in competitive sport and recreational physical activity will report higher physical self-perception in sport-related domains than non-participants as measured by the PSPP.

Jamaica is of particular interest because, unlike most developing countries, the island has established and maintained a remarkable sporting record over the past half-century. Jamaica has produced world-class athletes in various sports (J.I.S., 1999). Their unique and remarkable excellence in sport within the Caribbean context was shown in their 1988 participation in the Calgary Winter Olympics in the bobsled event. Additionally, the Jamaican national football team (Reggae Boys) created history when it qualified for the World Cup in 1998, as it was the first team from an English-speaking Caribbean nation to do so (J.I.S., 1999). In June 2005, a Jamaican sprinter, Asafa Powell, captured the world record for the 100m. Such value of sport may have an effect on the cognitions Jamaican youths hold for their involvement in sport and leisure physical activities. Specifically, it may also have an impact on the youths' self-perceptions of competence in the physical domain. This creates a compelling case for the study of the relationship between physical self-perceptions and physical activity behaviors of youths in this context. Further, in spite of this focus on sport, a 1993 national survey of lifestyle and behavioral risk factors in a sample of 958 Jamaicans showed that only 59% of the men and 40% of

the women reported engaging in minimal physical activity (20 minutes of work or exercise without stopping 3 or more times per week). Thirty-three percent of the women and 18% of the men said they were overweight (Figueroa, Fox & Minor, 1999). This suggests that Jamaica could be faced with similar global challenges of reduced physical activity and increases in the prevalence of obesity in the youth and adult population.

METHOD

PARTICIPANTS

The participants in this study were 1052 (426 male and 614 female) Jamaican adolescents attending high school (grades 7-12), aged between 12 and 19 years ($M = 14.61$, $SD = 1.17$). Twelve participants did not indicate their gender. Five hundred and ninety participants were recruited from urban schools, and 462 were from rural schools.

INSTRUMENTATION

A demographic information questionnaire and the Physical Self-Perception Profile (Fox & Corbin, 1989) were administered to all participants in this study. The demographic information questionnaire had 42 items designed to collect information on numerous factors such as age, gender, level of education, and sport history.

Physical Self-Perception (PSPP). The PSPP (Fox & Corbin, 1989) is a 29-item inventory designed to assess adolescents' domain-specific judgments of their physical self-esteem. The instrument has four (4) 6-item subscales: sport competence, physical attractiveness, physical condition, and strength; and a fifth scale that measures general physical self-worth. The *Sport competence* subscale measures perceptions of sport and athletic ability, *Physical condition* measures perceptions of level of physical condition, *Body attractiveness* measures perceived attractiveness of figure or physique, *Physical strength* measures perceived strength, muscle development, and confidence in situations requiring strength, and the *Global physical self-worth* scale measures general feelings of happiness, satisfaction, pride, respect, and confidence in the physical self.

The PSPP employs a structured alternative format whereby adolescents are asked to first decide which of two types of teenagers they are more like based on two statements and then to choose whether the statement is "sort of true" or "really true" for them. An example of the statements is, "Some people feel that compared to most, they have most attractive bodies, but others feel that compared to most, their bodies are not so attractive." Scores for each item on the profile vary from 1 (low self-perception) to 4 (high self-perception).

PROCEDURE

Permission to conduct this research was obtained from the Ministry of Education, Jamaica. Prior to data collection, permission was obtained from school principals. An explanation of the purpose and procedures of the study as well as the rights of the individuals

to withdraw or not respond to any question were provided at the beginning of the data collection exercise. Participants were then asked to sign their informed consent forms if they were willing to continue their participation in the study.

To guarantee anonymity of responses, participants were asked not to write their names on the questionnaires. Participants completed the paper and pencil instruments at one sitting in a classroom or assembly hall in the presence of the research team. It took each participant approximately 25 minutes to complete all the instruments.

RESULTS

Based on responses to a question on their level of involvement in sport, the participants were categorized into 3 groups: competitive sport participants ($n = 393$), recreational sport participants (leisure physical activity participants) ($n = 500$), and non-participants in physical activity ($n = 115$). Forty-four participants did not respond to this question. Approximately 76% of the competitive group reported that they played sport at least 2 times a week, with 49.7% of this group reporting that they played sport more than 4 times a week. Twenty-three percent of the group played sport at least once a week. Seventy-six percent participated in more than one sport, 72% played for their school, and 64% played sport outside school. In the recreational group, 36% reported that they participated in sport at least twice a week and 57% once a week or only when they felt like it. The non-participant group reported that they did not play sport at all.

Descriptive statistics: Sport participants took part in a variety of sports. The three most popular sports were track and field (22.7%), football (soccer) (22.5%), and netball (18.5%). Other sports that received higher ratings especially among the recreational group were cricket (8.4%), tennis (5.5%), basketball (4.4 %), and swimming (4.2%). These ratings fairly represent the sporting culture within the school system and the larger society in Jamaica. Football, netball, and track and field, as well as cricket, are the most popular sports on the island.

An examination of the main reasons sport participants gave to explain their involvement revealed that skill development (60.5%), learning new skills (58.3%), going to higher level of competition (53.5%), and doing something "I am good at" (61.9%) were for most youths very important reasons for their participation in sports. To win (59.9%) was also considered very important by most sport participants. Reasons that denote fitness and energy release (to get exercise, to stay in shape, and to have fun) also seemed to be very important to this sample of Jamaican youths.

Factor Analysis: A confirmatory factor analysis (CFA) was conducted using EQS version 6.1 to examine the factor structure underlying measured variables (Bentler, 2002). This procedure is deemed appropriate where previous theory/research strongly suggests a factor structure (Tabachnick & Fidell, 2001). All variables were normally distributed and there was no multicollinearity in the data set. There were several significant issues in examining this factor structure. The results first showed that there was linear dependency in the data, between variable 21 and the factor of Sports Competence. This was alleviated by freeing the path between those variables. The results then showed linear dependency between the factors of Sports Competence and Physical Strength.

This also resulted in freeing the path between those two factors. Previous research with cross-cultural samples (Hagger, Asçi, & Lindwall, 2004; Marsh, Asçi, & Tomás, 2002) have noted problematic correlations between the factors of the PSPP. After those two model alterations, the CFA did converge, but showed very poor fit to the data (CFI = .47, GFI = .66, RMSEA = .100, SRMR = .142). Accepted criteria for excellent goodness of fit include above .95 on the CFI and other goodness of fit indexes (Hu & Bentler, 1999), .08 or less for the SRMR (Hu & Bentler, 1999), and .05 or less for the RMSEA (Browne & Cudeck, 1993).

Considering that two major modifications to the model had already occurred, both of which are contradictory to the conceptual framework for the analysis, and that many more modifications would be necessary before the results would approach acceptable fit, it was decided that the current data was not a good fit for the PSPP model. Subsequently, analyses were undertaken to determine what, if any, model would be a good fit for this sample.

An exploratory factor analysis (EFA) was then conducted using the 30 items from the PSPP. This step is considered appropriate when no theoretical/research-driven model is appropriate. Considering the size of the present sample, the data was jackknifed into two independent sub-samples (*n*'s of 525 and 527). The subsequent data analysis then involved conducting an EFA on one of these samples and confirming the emergent factor structure with a CFA on the other, independent sample.

A factor analysis was conducted on the first sample (*n* = 527) using SPSS version 13.0. Method of extraction was Maximum Likelihood, and oblique rotation was used so that the factors might correlate. According to Tabachnick and Fidell (2001), factor loadings of .45 (20% overlapping variance) are considered fair. This cutoff was used with this sample, although it was adjusted to .46 to allow for easier interpretation of potential cross-loading variables as there were several cross-loadings between .45 and .46. Any items that significantly cross-loaded on more than one factor were deleted. This resulted in a three-factor solution. Each factor had an eigen value of over 1, and the three factors accounted for 25.5% of the variance in the data. These three factors are described in Table 1. The factors were labeled as follows. The first factor was defined as Physical Self-Worth. The items in this factor were originally in three of the PSPP factors (i.e., Physical Self-Worth, Sport Competence, and Body Attractiveness). They appear to reflect a global aspect of physicality, which also relates to sport competence, body attractiveness, and other perceptions. The second and third factors each had items from the PSPP factors of Physical Condition, Body Attractiveness, and Physical Strength. However, there appeared to be a significant difference in the theme of these two variables. The second factor dealt with perception of an attractive physique (e.g., have an attractive body, feeling that they are physically stronger). The third factor was comprised of items that dealt with the explicit display of these features (e.g., performance in situations requiring strength, maintaining a high level of stamina and fitness). Therefore, the second factor was labeled Physical Appearance, and this third factor was labeled Physical Competence. Cronbach's alphas for the three factors were .77, .56, and .50, respectively. These values with the second data set (*n* = 525) were .76, .43, and .46,

Table 1. Factor Loadings of Principle Components Analysis

Item	Factor 1	Factor 2	Factor 3
PSPP5	.50		
PSPP16	.54		
PSPP18	.47		
PSPP20	.54		
PSPP22	.57		
PSPP26	.63		
PSPP28	.64		
PSPP30	.66		
PSPP3		.63	
PSPP4		.72	
PSPP27		.51	
PSPP8			.59
PSPP12			.60
PSPP29			.48

Note. N = 527. Oblimin rotation used. Structure matrix results shown.

respectively. It should be noted that the values for the second and third factors are below the conventionally accepted value of .70.

A CFA was then conducted using EQS 6.1 on the second sample ($n = 525$), testing this factor structure. Maximum Likelihood method was followed. The results showed an acceptable goodness of fit (CFI = .915, GFI = .954, RMSEA = .052, SRMR = .044). Table 2 shows the factor loadings and errors of this factor structure. All variables were significantly loaded onto their factors ($p < .05$).

Analysis of Invariance: Considering the size and heterogeneous nature of the sample, it was decided to conduct analyses of invariance on the revised PSPP. In particular, we examined whether the model varied between gender, region (i.e., urban or rural), and grade level (i.e., grades 7-9 or grades 10-13). These analyses were conducted as per the guidelines of Byrne (1994). This comprises two sequential steps: testing the invariance of the measurement model (e.g., factor loadings and errors) and then testing the invariance of the structural model (e.g., variance and cross-variance of factors).

Each of the analyses showed some concern with respect to the invariance of the revised PSPP between groups. With respect to gender, the analysis of the invariance of the model resulted in a CFI of .853. There were three significant Lagrange Multiplier (LM) χ^2 results, which signify that particular factor loadings may be invariant between groups. These were PSPP 22 and PSPP 26 on Physical Self-Worth, and PSPP 29 on Physical Competence. Byrne notes that factors may be allowed to be unconstrained across groups if there are multiple indicators and at least one invariant measure for each

Table 2. Standardized factor loadings and errors on Confirmatory Factor Analysis

Variable	Loading	Error
Factor 1		
PSPP5	.54	.84
PSPP16	.50	.86
PSPP18	.55	.84
PSPP20	.60	.80
PSPP22	.60	.80
PSPP26	.51	.86
PSPP28	.60	.80
PSPP30	.58	.81
Factor 2		
PSPP3	.41	.91
PSPP4	.39	.92
PSPP27	.51	.86
Factor 3		
PSPP8	.41	.91
PSPP12	.41	.91
PSPP29	.62	.80

Note. $N = 525$. All factor loadings were significant at $p < .05$.

latent construct. As this was the case, these three factor loadings were allowed to be unconstrained. This resulted in a goodness of fit across the groups (CFI = .909) with no remaining invariant loadings between the groups. The examination of the invariance of the structure of the model showed that the variance of Physical Competence may not be constant between groups. With this unconstrained, the CFI improved to .910.

In comparing invariance in the model between individuals from rural and urban areas, it was found that after the factor loadings between PSPP 16 and PSPP 26 and Physical Self-Worth were unconstrained between groups, the model showed a CFI across groups of .894. All other factor loadings showed non-significance with respect to potential variation across groups. Subsequent analysis of the invariance of the factor structure gave a CFI of .893 with all parameters significantly invariant between groups.

Finally, examination of the factor structure between students in grades 7-9 and 10-13 showed less than acceptable fit, but no statistically significant invariance between

groups. Examination of invariance of measure resulted in a CFI of .891; invariance of the factor structure resulted in a CFI of .889.

The results of these analyses reveal that caution should be used in applying this model across different groups, particularly with respect to Physical Self-Worth. Further, it must be noted that all of the goodness of fit indicators for testing invariance were well below that of the entire sample (CFI = .915).

Subsequent Analyses: Inter-correlations between the factors, age, and frequency of involvement in sport and recreational physical activity are provided in Table 3. There was a low but negative significant correlation between Physical Competence, Physical Self-Worth, and Physical Appearance, and there was a strong correlation between Physical Self-Worth and Physical Appearance. Frequency of participation in sport and recreational physical activity were negatively correlated to Physical Self-Worth and Physical Appearance. Age was positively correlated to Physical Self-Worth and Physical Competence.

Finally, these factors were examined in the total sample ($N = 1052$) to see if there were any differences according to gender, region, grade level (age group), and level of sport participation. Three separate MANOVA's were conducted, one for each of these

Table 3. Intercorrelations between PSPP Factors, Age, and Frequency of Sport Involvement

Variable	1	2	3	4	5
1. Age	-				
2. Frequency of sport involvement	-.13**	-			
3. Physical Self-Worth	.08*	-.13**	-		
4. Physical Appearance	.03	-.09*	.58**	-	
5. Physical Competence	.12**	-.00	-.09**	-.07*	-

** $p < .01$, * $p < .05$ **Table 4.** Mean Differences for PSPP Factors by Level of Involvement

Group	Physical Self-Worth		Physical Appearance		Physical Competence	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Competitive	2.84	.71	2.83	.76	2.75	.74
Recreational	2.64	.62	2.67	.71	2.64	.70
Non-participant	2.47	.61	2.58	.69	2.47	.76
Effect sizes	.04		.02		.02	

independent variables. The only significant main effect found was for level of sport participation ($F(6, 1782) = 8.33, p < .0001, \eta^2 = .03$). There was a significant effect of level of sport participation on each of these revised PSPP factors, all at $p < .0001$, η^2 's ranged from .02 - .04. Follow up Bonferroni t-tests revealed the following significant differences. For Physical Self-Worth and Physical Appearance, competitive athletes had significantly higher means than recreational athletes and non-athletes. The recreational athletes did not differ significantly from non-athletes on all three factors. For Physical Competence, competitive athletes did not have significantly higher means than recreational athletes, but they differed significantly from non-athletes. Table 4 gives the mean values for these significant differences.

DISCUSSION

The primary result of the current study is that the factor structure of the PSPP as proposed by Fox and Corbin (1989) is not appropriate for the present sample of Jamaican adolescents. Instead, a three-factor model of Physical Self-Perception appears to be a better fit for the data. The present analyses support this factor structure, although the model may require more support in terms of internal reliability.

The three factors proposed based on the current data analysis have been termed Physical Self-Worth, Physical Appearance, and Physical Competence. The results from the CFA suggest that Jamaican adolescents' perceptions of physical self-perception are not

necessarily organized by sub-domains (i.e., sport, strength, and conditioning). Instead, it appears that the factors represent different themes of perceptions (i.e., self-worth, appearance, and competence) that are relevant across these sub-domains. This is apparent in the fact that these revised factors are each comprised of items from at least three of the original PSPP sub-domains. While the impact of the idiosyncratic forced-choice response format and cultural factors could not be ruled out in the ineffectiveness of the items to tap the salient aspects of the original model, it seems that this sample of Jamaican adolescents evaluated their physical self-worth and body attractiveness, not in terms of sub-domains of activities, but in levels of perceptions across activities. This suggests difficulty among these youths in using the PSPP items to differentiate some sub-domains.

The low-to-moderate correlations between the new factors may also reflect a less differentiated physical self-concept with the current sample of Jamaican adolescents. There could be a cultural explanation to the scenarios presented above. There might be less perceived importance placed on body attractiveness among Jamaican youths than their North American counterparts. This finding would not be unexpected in a less developed country. Further, the PSPP items might be perceived in the light of their utilitarian value, such as how they relate to domains of achievement such as sport competence.

In contrast to what has generally been reported in studies involving North American and Western European samples, it would seem that the PSPP items could not confirm the original 5 factors with the current sample from Jamaica. This lends support to observations from previous studies that the PSPP has, to some extent, weak discriminant validity due to the scale's attempt to cover broad physical self-perceptions with few factors (Crocker, Eklund, & Kowalski, 2000; Hagger, Biddle, Chow, Stambulova, & Kavassanu, 2003; Richards, Marsh, Bar-Eli, & Gurion, 2005). It could also be explained in terms of cultural factors affecting self-concept and self-esteem research observed by Oyserman, Coon, and Kemmelmeier (2002). Oyserman and colleagues suggested that the predominance of individualism in Western European cultures and collectivism in non-Western cultures, such as those found in Asia and other parts of the world, lead to variations in responses to self-concept scales. Western European cultures have been found to rate their self-esteem more highly than other cultures, which invariably suggests that they are also likely to have a more differentiated sense of the self compared to other cultures. Hagger et al. (2003) made similar observations. Although caution has to be exercised when using the individualism-collectivism distinction to explain the inability of the PSPP items factors to tap the salient factors of the original model, it could be argued that Jamaica, with its African heritage, has to some extent a predominance of collectivist culture compared to North America and Western Europe (Hofstede, 1991).

In this sample, there were significant differences between different levels of sport participation on the three factors. Specifically, it was found that there were significant differences between competitive athletes and recreational and non-athletes on all three factors. The significant main effect for level of involvement in physical activity and sport is consistent with previous studies examining this relationship (Asci, Kosar, & Isler, 2001; Craft, Pfeiffer, & Pivarnik, 2003; Kirkcaldy, Sheppard, & Sefen, 2002). The studies by Asci et al. (2001) found perceived athletic competence to increase with greater partici-

pation in physical activity as well as a significant relationship between physical activity and self-concept. With the current sample, frequency of involvement in sports increased with level of involvement, with the competitive group reporting more hours of engaging in sports compared to the recreational group. Similarly, Craft et al. (2003) found adolescent girls with higher VO_2 max values had higher perceptions for athletic competence. The significant group differences on the three factors suggest the importance of the physical self-concept factors to athletic competence already established in the literature (Richards et al., 2005; Welk & Eklund, 2005). It may also be that, as observed elsewhere, active youth may rate themselves more favorably on the various domains of the PSPP than inactive youth (Welk & Eklund, 2005).

Whereas recreational athletes displayed significantly greater Physical Self-Worth and Physical Appearance, there were no significant differences between the two groups on Physical Competence. The invariance on Physical Competence between the recreational and non-participant groups could be an indication that there were minimal differences between the two groups on the subjective value of physical strength. Maybe the differences in fitness levels between the groups were so minimal that they could not lead to a separation of the groups on the basis of perceived physical strength.

Contrary to findings from previous studies, the current data showed no age and gender differences on the PSPP factors (Biddle & Armstrong, 1992; Crocker et al., 2000; Fox, 1990; Welk & Eklund, 2005). However, gender invariance on the PSPP factors has been observed elsewhere (Asci et al., 2001; Richards et al., 2005). This suggests the need for further investigation of factors that underlie presence or absence of gender differences on the PSPP. Welk and Eklund (2005) suggested that there could be a sociological explanation to gender differences on the PSPP. Unlike North America, Jamaica is a matrifocal society (Smith, 1996). It is likely that there is gender equity in the way Jamaican society transmits values on sport and the physical domain. The success of the male and female Jamaican track athletes internationally is probably testimony to this.

Although frequency of involvement in sport and age were lowly correlated, the significant negative correlation suggests that activity levels of youths in this study declined with age. Thus, Jamaica is not an exception to the global trends on declines in activity levels with age. More comprehensive measures of activity levels as well as longitudinal designs might have yielded even stronger effects.

In summary, the findings in this study suggest that the factor structure of the PSPP as proposed by Fox and Corbin (1989) is not appropriate with the present sample of Jamaican adolescents and instead propose that a three-factor model based on the original PSPP items appears to be appropriate for this data. The study also found significant differences between different levels of sport participation on the three factors, thereby confirming importance of physical self-perceptions to athletic competence as established in the literature. As observed in previous studies, no gender and age differences were found. Cultural differences and the complexity of the structured alternative format used in the PSPP are observed. It is possible that Jamaican youths might not be placing as much emphasis on all the hypothesized subdomains of physical self-perception as their North American and Western European counterparts on which this model was originally normed.

Results from this study have a number of practical implications. Although the original PSPP model did not fit the current data, the use of the PSPP among Jamaican youths has promise. Continued work with the PSPP and other physical self-concept scales is needed to develop a better understanding of physical self-perceptions in Jamaica and less studied populations. That Jamaican adolescents seem to hold similar beliefs and expectancies about factors that affect their athletic competence found in other parts of the world suggests need for in-depth investigations of the psychological correlates of their participation in sport and leisure physical activities. Findings from such research should help inform the provision of sport and physical activity programs that cater to the diverse needs of children and youth.

In addition to more research testing physical self-concept models among Jamaican youths, future studies should have comprehensive measures of physical activity to allow for broader generalization of findings on the ability of physical self-concept to predict activity patterns. This study was limited in terms of its measure of physical activity. The impact of other factors such as the social environment on self-perceptions and engagement in achievement behaviors is likely to yield interesting results. Gender differences in participatory patterns and other psychological factors affecting participation need to be investigated. Longitudinal designs should yield much stronger effects.

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