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PERCEIVED COMPETENCE AND PHYSICAL ACTIVITY INVOLVEMENT AMONG YOUTHS: AN EXAMINATION OF HARTER'S COMPETENCE MOTIVATION THEORY IN BOTSWANA

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ABSTRACT

The study examined if the factor structure of the Self-Perception Profile for Adolescents (SPPA) suggested by Harter (1978; 1988) would fit a sample of youths from Botswana and whether perceived competence would predict patterns of involvement in sport and physical activity among the youths. Participants were secondary school youths from urban and rural Botswana (N=903), aged 13-18 years, involved in competitive sports, leisure physical activity, and non-participants. All participants completed a background information questionnaire and the SPPA. Results indicated that the original factor structure did not fit the current sample. A modification of the original model yielded two factors, which were labeled Physical Appearance and Self-worth. Only Self-worth accounted for significant differences on patterns of involvement in sport. Non-participants and recreational sport participants had higher perceptions of Self-worth compared to competitive sport participants. The lack of fit for the SPPA could be explained in terms of method effects or cultural specificity.

Key words: Self-perception; Cultural extension; Perceived competence; Confirmatory factor analysis.

INTRODUCTION

Harter's (1978, 1981) competence motivation theory has been the most frequently used framework for the study of participation motivation in children and youths (Feltz & Petlichkoff, 1983; Klint & Weiss, 1987; Weigand & Broadhurst, 1998). The theory proposes that individuals have an inherent desire to feel and express competence in the social, cognitive, and physical domains of achievement (Harter, 1978). Further, the expression of the motive towards competence is mediated by underlying self-related cognitions, particularly self-perception of competence and control. Therefore, competence motivation theory would predict that participants in competitive and recreational sports should have higher perceptions of competence in the sport-related domains than non-participants.

Competence motivation theory includes the prediction that children who participate in evaluative and competitive sport contexts have higher perceived competence and control than children who participate in non-competitive and non-evaluative sport contexts, children who are non-participants, and dropouts. Weiss *et al*. (1986) found that the higher perceptions of competence of 8 to 12-year-old swimmers had an impact on their actual competence in swimming and their preference to perform hard. They concluded that higher perceived

competence also encourages the child to develop an internal sense of whether he or she has succeeded as opposed to depending on external sources of evaluation such as teacher feedback. Similar findings were reported by numerous other studies (Feltz & Petlichkoff, 1983; Klint & Weiss, 1987). Thus, it seems perception of competence is one of the major factors that affect achievement and motivational orientation among children and youth.

Roberts *et al.* (1981) investigated the role of perceived competence in the participation of children in sport, using Harter's (1978) competence motivation framework. Their study contrasted participants with non-participants. They found that sport participants had higher self-perceptions of physical competence and cognitive competence compared to non-participants. In a similar study, Feltz and Petclichkoff (1983) examined perceived competence among interscholastic sports participants and dropouts. They found that interscholastic sport participants were higher in perceived physical competence than dropouts. Klint and Weiss (1987) examined the relationship between perceived competence and motives for participation in gymnastics among youths. They found that gymnasts high in perceived physical competence were more motivated by skill development reasons than their counterparts with lower perceived physical competence. Gymnasts with higher perceived social competence were more motivated by opportunities for affiliation than gymnasts with lower social perception.

More recent findings give more support to the relationship between self-perceptions of competence and sport participatory behaviour. Russell (2002) examined the relationship between self-esteem, body satisfaction, and social physique anxiety across males of differing self-reported exercise frequency. Results from this study indicated that body dissatisfaction and self-esteem were related to strength training frequency and aerobic exercise frequency. Weigand and Broadhurst (1998) examined the relationship among perceived competence, intrinsic motivation, and control perceptions in soccer in British male soccer players aged 12 to 18 years old. They found a significant positive relationship among perceived soccer competence, motivational orientation, and internal perceptions of control. Years of soccer experience and intrinsic motivation were found to be the best predictors of soccer competence.

Most of the research aimed at testing Harter's (1978) competence motivation theory in relation to participation in sport was conducted in North America. However, a number of studies have been conducted in other parts of the world such as Europe and China (Ommundsen & Vaglum, 1991; Walsh *et al.*, 1992; Goudas *et al.*, 1994; Wang & Wiese-Bjornstal, 1995; Kim & Gill, 1997). Ommundsen and Vaglum examined the relationship among perceived soccer competence, perceived social integration, players' perceptions of coach and parental behaviour, and enjoyment and motivation to participate in soccer. They found perceptions of mastery and control, and feelings of being socially included in the team to be significant predictors of motivation to participate and persist in soccer. Positive parental and coach behaviours were related to soccer enjoyment. These findings were supported in a similar study conducted among youth sport participants in China (Wang & Wiese-Bjornstal, 1995). Wang and Wiese-Bjornstal revealed that perceived competence, persistence, and performance were significant predictors of involvement in sport among youths. Further, gender differences were found, with males having higher perceptions of competence, persistence and performance in selected tasks, compared to females.

Although much research using Harter's (1978; 1988) model has been conducted in other parts of the world besides North America, very little is known about the role of perceived competence on sport and physical activity behaviours of youths in Botswana and the rest of Africa. The dearth of sport behaviour literature on Botswana and most of Africa presents major challenges in any attempts to understand psychological determinants of the involvement of youth in sports. It also presents a big challenge to educators and social policy makers on what constitutes effective youth programmes. The growth in public awareness of the value of participation in sport and physical activity in Botswana as demonstrated by ongoing efforts to improve sports facilities in major towns creates a need to develop a better understanding of factors that affect the participation of youths in sport. An understanding of factors that impinge upon youths' behaviours in sport should guide the promotion of sport and physical activity as part of a comprehensive strategy to promote physical and psychological health.

The purpose of this study was to test Harter's (1978; 1988) competence motivation theory among Botswana youths. The study sought to answer the following questions; (a) Would the factor structure of the Self-Perception Profile for Adolescents (SPPA) suggested by Harter (1988) fit a sample of youths from Botswana? (b) Would perceived competence predict patterns of involvement in sports and leisure physical activities among Botswana youths?

Based on the two questions, two hypotheses were proposed; (a) The original factor structure of the SPPA proposed by Harter would be confirmed using the current data from Botswana, (b) Botswana youths who participate in competitive sports and leisure physical activities have higher perceived competence in sports related domains of competence than non-participants in sport and physical activity.

METHOD

Participants

The participants in this study were 411 male and 492 female junior and senior secondary school students from urban (n=567) and rural (n=336) Botswana, between the ages of 13 and 18 years (M=16, SD=1.10). The original number of respondents was 1 308. Approximately one-third (n=405) of the original sample was deleted from the study because of failure to complete all the items. An examination of descriptive statistics showed that participants who were excluded from the analyses because of missing items were fairly distributed by gender, region, form level, and level of involvement in sport. In addition, the missing items appeared to be evenly distributed as well. The participants in the study were recruited from 20 schools in nine geographical districts. The schools were selected because they represented urban or rural areas in different geographical regions. Rural areas in Botswana are labeled so because of the predominance of traditional settlement, that is settlement by clan or kinship, fewer amenities, and a very low level of industrial development compared to urban areas. They also tend to have less population compared to urban areas. Of the 903 participants retained in the study, 874 were Botswana, 28 Zambian, and one Zimbabwean.

Based on self-reported levels of involvement in sport and recreational physical activity, the participants were categorised into three groups: competitive sport participants (n=583),

recreational participants (leisure-related physical activity participants) (n=134), and non-participants in physical activity (n=186). The competitive group reported that they played competitive sport at least four times a week and on most weekends during the school sport season, while the recreational group reported that they participated in recreational sports and physical activity at least three times a week. The non-participant group reported that they did not play. The three groups were classified under a variable called Sport Category, which had three dummies reflecting level of involvement in sport. Of the 903 youths who took part in this study, 481 said they were members of a school athletic team and 292 played sport outside of school. The seven most popular sports selected by competitive and recreational sports participants were soccer (13%), volleyball (10.2%), softball (10.3%), badminton (8.7%), table tennis (7.2%), netball (6.3%), and track and field (3.1%). About 10% of the respondents played more than one sport.

Participants were also grouped into two form levels: junior forms (n=502) and senior forms (n=401). These levels represent the structure of secondary education offered at public schools in Botswana. Early secondary education is offered at Community Junior Secondary schools and lasts three years while senior secondary school offers an O' level certificate and lasts two years. The typical age ranges for junior secondary school is 12-15 years while the age range at senior secondary school is 16-18 years. However, there is some little age variability between urban and rural areas. Children from rural areas, especially smaller villages, tend to start school slightly later than their urban counterparts. The average age for the participants in this study was 15.5 years (SD=1.20) for junior forms and 16.6 years (SD=0.65) for senior forms. A breakdown of the number of participants by Sport Category, Region, Gender, and Form Level is contained in Table 1.

TABLE 1. **NUMBER OF RESPONDENTS BY SPORT CATEGORY, REGION, GENDER, AND FORM LEVEL**

	Males		Females		
Sport Category	**Urban**	**Rural**	**Urban**	**Rural**	**Total**
Competitive					
Junior Forms	52	121	35	139	347
Senior Forms	38	76	43	79	236
Recreational					
Junior Forms	15	15	10	20	60
Senior Forms	11	15	28	20	74
Non-Participant					
Junior Forms	29	15	32	19	95
Senior Forms	11	13	32	35	91
Total	156	255	180	312	903

Measures

A Background Information Questionnaire and the SPPA were administered to all participants in this study. The inventories were written in English as English is an official language as well as the medium of instruction at all secondary schools in Botswana.

The Background Information Questionnaire was a 34-item instrument designed by the principal investigator to collect the relevant demographic information about the participants. In addition to collecting vital demographic information, the questionnaire items were designed to gather information about patterns of involvement in sport, type of activities, and the history of involvement in sport and physical activity.

The original Self Perception Profile for Adolescents (SPPA) (Harter, 1988) was used to assess adolescents' domain specific judgments of competency or adequacy, as well as global perceptions of one's worth as a person. The SPPA is a 45-item instrument, presented in a structured alternative format, whereby respondents are asked to first indicate which of the two teenagers they are more like and then choose a statement that is "sort of true" or "really true" for them. Scores for each item vary from 1 (low perceived competence) to 4 (high perceived competence). The SPPA comprises nine subscales labeled scholastic competence, physical appearance, athletic competence, social acceptance, job competence, behavioural conduct, close friendship, romantic appeal, and global self-worth.

Procedure

Permission to conduct this research was obtained from the institutional review board. Further permission to conduct the study in Botswana was obtained from the Office of the President in Botswana. Prior to data collection, permission was obtained from school principals to conduct the study in their schools. All the participants provided verbal and signed consent to participate in the study. The paper and pencil instruments were administered in a classroom or an assembly hall. Participants completed the questionnaires independently but were helped with reading or understanding of the questions by the principal investigator where necessary. Test administration sessions lasted approximately 30-40 minutes.

RESULTS

Does Harter's (1988) SPPA factor structure fit a sample of youths from Botswana?

Factor Analysis and Internal Consistency: A preliminary analysis was conducted to test for internal consistency of Harter's (1988) SPPA subscales, the coefficient alphas ranged between 0.21 and 0.59. Therefore, the original nine factors suggested by Harter were considered unreliable for use with this particular sample and a factor analysis was deemed necessary to determine reliable factors for analyses with this instrument. An exploratory factor analysis (EFA) was conducted on the original 9-factor scale specified by Harter (1988). Principal component factor analysis with varimax rotation yielded 14 factors with eigenvalues greater than 1.00. A closer look at the scree-plot revealed that the elbow point came after the sixth factor; therefore only six factors were retained. Of the original 45 items, 24 items with factor loadings lower than 0.30 or cross-loadings greater than 0.30 were eliminated from the scale.

The final factor structure had 6-factors with a total of 20 items, which accounted for 49.9% of the overall variability in scores. The modified scale seemed to have sensible structure that even resembled four of Harter's original factors of physical appearance, behavioural conduct, social acceptance, and close friendship. However, the Cronbach's alphas were still very low, ranging

from 0.31 to 0.67. Therefore, the first hypothesis was not supported and there was no further interpretation of the extracted factor solution. The six-factor solution is provided in Table 2.

Given the low Cronbach's alphas for the modified factors, a test of internal consistency was conducted using the original 45 items as one dimension, with an option to show alphas when items were deleted. Nine items were retained and had an acceptable Cronbach's alpha of 0.75. An EFA was conducted on the nine items to determine if they could be reduced to a smaller number of categories that best represent sub-domains of competence in the current sample using the SPPA. Principal component factor analysis with varimax rotation revealed two factors with eigenvalues greater than 1.00, explaining 47% of the variance between scores. The extracted factors were labeled Physical Appearance and Self-worth and closely resembled these factors as stated in Harter's (1988) original model. The factors had a correlation coefficient of 0.45. The factors had moderate internal consistencies of 0.67 (Physical Appearance) and 0.66 (Self-worth). A summary of the factor structure is presented in Table 3.

TABLE 2. **FACTOR STRUCTURE FOR THE SIX FACTORS FROM THE SPPA**

Items	1	2	3	4	5	6
Body image	0.78	--	--	--	--	--
Perception of physical appearance	0.72	--	--	--	--	--
Feelings about own looks	0.63	--	--	--	--	--
Feelings about self	0.56	--	--	--	--	--
Ability to stay out of trouble	--	0.74	--	--	--	--
Doing or not doing things you shouldn't do	--	0.71	--	--	--	--
Determining right from wrong	--	0.53	--	--	--	--
Acting accordingly	--	0.49	--	--	--	--
Feelings about own looks	--	--	0.60	--	--	--
Ability in class-work	--	--	0.56	--	--	--
Romantic appeal	--	--	0.53	--	--	--
Feelings about the way one acts	--	--	0.49	--	--	--
Liking or not liking the way you are	--	--	--	0.63	--	--
Feelings about looks	--	--	--	0.53	--	--
Social acceptability	--	--	--	0.51	--	--
Friendships	--	--	--	--	0.67	--
Ease of making friends	--	--	--	--	0.67	--
Ability to make close friends	--	--	--	--	0.64	--
Ability to do at all kinds of sports	--	--	--	--	--	0.81
Ability to do part-time job	--	--	--	--	--	0.46
Eigenvalues	4.87	2.44	1.83	1.71	1.55	1.31
Percent variance explained	17.7	8.89	6.68	6.22	5.64	4.76
Cronbach's alpha coefficients	0.67	0.54	0.47	0.56	0.38	0.31

--Factor Loadings less than 0.30.

A first-order CFA was conducted on the nine items using Amos 3.61 (Arbuckle, 1997) to determine if the 2-factor structure could be confirmed. Correlations among the nine items were

used as the basis for the CFA. An examination of the global indices of fit revealed a small Chi-square, χ^2 (26, N=823)=2.77, p<.0001. The global fit indices reached the acceptable level of good fit (GFI=0.98, AGFI=0.97, NFI=0.94, CFI=0.96, TLI=0.95). The RMSEA was 0.05. Therefore, the two-factor solution from the EFA was not only sensible, but it was also confirmed. The two factors were used in further analyses on perceived competence.

TABLE 3. **FACTOR STRUCTURE FOR THE FINAL TWO FACTORS EXTRACTED FROM THE SPPA**

Item	Factor 1	Factor 2
Physical Appearance	0.76	--
Physical Appearance	0.70	--
Physical Appearance	0.69	--
Self-worth	0.63	--
Physical Appearance	--	0.69
Self-worth	--	0.67
Self-worth	--	0.63
Self-worth	--	0.59
Scholastic Component	--	0.57
Eigenvalue	3.02	1.19
% Variance Explained	33.59	13.22

--Factor Loadings less than 0.30

Does perceived competence predict patterns of involvement in sport and physical activity?

To answer the second question concerning whether participants in competitive sports and leisure physical activities have higher perceived competence in the sport related domains of competence than non-participants, a 3 x 2 x 2 (Sport Category by Region by Form Level) multivariate analysis of variance (MANOVA) was conducted on the two extracted factors of Physical Appearance and Self-worth. Homogeneity of variance-covariance matrices, multicollinearity, normality, univariate outliers, and linearity assumptions were conducted. Results showed that these assumptions were not violated, except for homogeneity of variance-covariance. Given the unequal sample sizes and significant Box's M tests for homogeneity of variance-covariance matrices, Pillai's Trace criterion was used in the interpretation of results from the MANOVA tests. This decision was in line with Tabachnick and Fidell's (1996) suggestion that this criterion is more robust when sample sizes are notably discrepant and the Box's M tests for homogeneity of variance-covariance matrices are significant.

Preliminary Analyses

To account for possible Gender, Form Level and Region effects in the test of the proposed hypothesis, preliminary one-way MANOVAs were conducted using the three factors as independent variables and Physical Appearance and Self-worth as dependent measures. Form Level was considered to be a potential confounding variable because of the possible variability in

focus and value placed on sport and other educational experiences between junior and senior secondary school. The region where a school was located in was also considered to be a potential confounding variable because of the disparities in level of development and general living conditions between urban and rural areas in Botswana. There was a significant effect for Region and Form Level ($p<.05$). Therefore, Region and Form Level were included in further analyses on perceived competence.

Hypothesis Testing

Results showed a significant main effect for Sport Category, Pillai's Trace=0.03, $F(4, 1610)=4.88$, $p<.001$, and Region, Pillai's Trace=0.03, $F(2, 804)=9.58$, $p<.0001$. An examination of univariate effects for Sport Category showed that Self-worth, $F(2, 805)=9.68$, $p<.0001$ accounted for the effect. For Region, it was Physical Appearance, $F(1, 805)=18.99$, $p<.0001$, that accounted for the effect. Post-hoc analyses of main effects were conducted using Tukey WSD procedure. For Sport Category, recreational (M=15.55, SD=3.90) and non-participant groups (M=15.56, SD=3.48) had significantly higher perceptions of Self-worth compared to the competitive group (M=14.44, SD=3.58). Effect size (ES) equaled .15 and .16 respectively. For Region, results showed that rural youths (M=12.09, SD=3.25) had significantly higher perceptions of Physical Appearance compared to urban youths (M=11.08, SD=3.39). ES equaled .15. Effect sizes were calculated using the pooled standard deviations of the post hoc means. These results did not support the proposed hypothesis.

Although there was an effect for Sport Category, that effect was only for Self-worth, and it was the opposite of the hypothesised difference. Botswana youths who participate in competitive sport had lower Self-worth compared to the recreational and non-participant groups. These effects must be viewed with caution because of low effect sizes. Means and standard deviations for Self-worth and Physical Appearance by Sport Category are presented in Table 3. Means and standard deviations for Self-worth and Physical Appearance by Region are presented in Table 4. The sport category and regional differences are illustrated in Figure 1 and 2 respectively.

TABLE 4. **MEANS AND STANDARD DEVIATIONS FOR PHYSICAL APPEARANCE AND SELF-WORTH BY SPORT CATEGORY**

	Physical Appearance		**Self-worth**	
Category	M	SD	M	SD
Competitive	11.74	3.35	14.44	3.58
Recreational	11.55	3.21	15.55	3.90
Non-participant	11.74	3.41	15.56	3.48

TABLE 5. **MEANS AND STANDARD DEVIATIONS FOR PHYSICAL APPEARANCE AND SELF-WORTH BY REGION**

	Physical Appearance		**Self-worth**	
Region	M	SD	M	SD
Urban	11.08	3.39	14.82	3.53
Rural	12.09	3.25	14.87	3.71

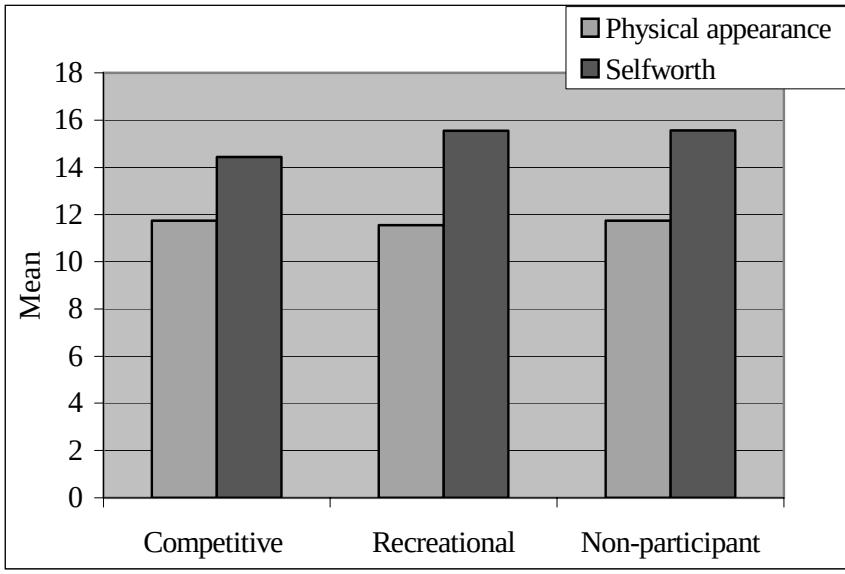

FIGURE 1. **MEAN DIFFERENCE FOR PHYSICAL APPEARANCE AND SELF-WORTH BY SPORT CATEGORY**

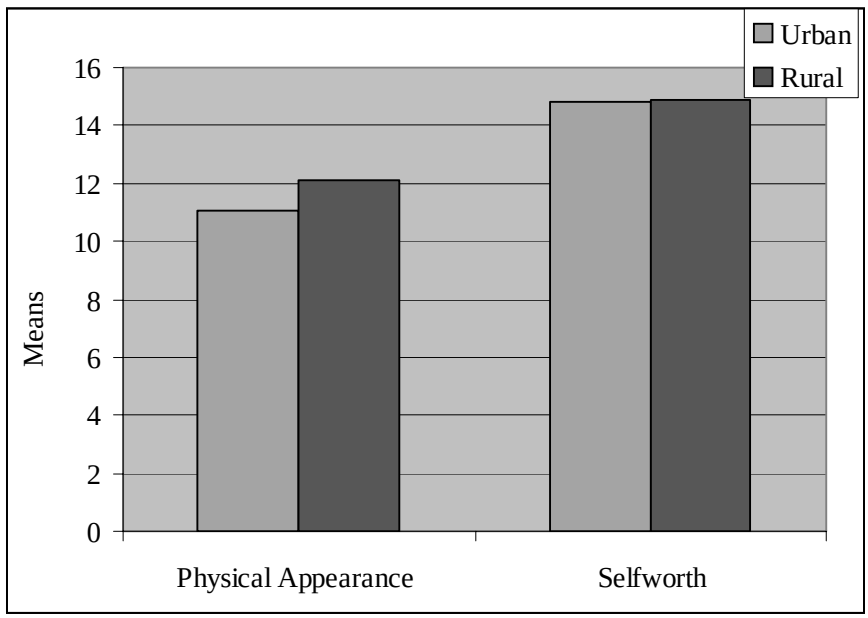

FIGURE 2. **MEAN DIFFERENCE FOR PHYSICAL APPEARANCE AND SELF-WORTH BY REGION**

DISCUSSION

The aim of this study was to examine if the original factor structure of the SPPA proposed by Harter would be confirmed with the current data from Botswana. The study also examined if Botswana youths involved in competitive sports and leisure physical activities would have higher perceived athletic and physical competence compared to non-sport participants as suggested in previous studies using the model. Following previous studies using Harter's model of perceived competence, it was hypothesised that the factor structure of the SPPA will be confirmed using the current data from Botswana. It was further hypothesised that levels of perceived competence would be predictive of patterns of involvement in competitive sport and leisure physical activity.

Does Harter's (1988) SPPA factor structure fit a sample of youths from Botswana?

A test of Harter's (1988) original model of perceived competence revealed that the original model did not fit the sample used in the current study. Various explanations could be provided for the lack of convergence for the SPPA model. The lack of model fit could have partly been due the difficulty associated with completing the structured alternative response scale. Problems associated with the structured alternative response format used in the SPPA have been observed in previous studies testing the validity of self-concept scales using the same format (Wylie, 1989; Marsh *et al*., 1994; Marsh *et al*., 2002). Marsh *et al*. (2002) observed that it is not uncommon for some respondents to select mostly statements on the left side of the page whereas others select mostly items on the right side of the page when in fact they are supposed to select right side and left side statements with approximately equal frequency given that there is an almost equal proportion of negative and positive statements on both sides of the page. This phenomenon was present with the current sample and could have been compound by language competency and other social-environmental factors. However, it was not possible to determine the extent to which it could have affected the factor solution of the original model. Psychometrically, the SPPA appeared to be weaker for responses by Botswana youths compared to other studies conducted elsewhere. The coefficient alpha estimates of reliability were much lower than typically reported in other studies, suggesting that there could have been more measurement error with this sample compared to studies conducted elsewhere.

The lack of fit for SPPA could also be explained in terms of cultural specificity of the model to the context of Botswana. For instance, the job competence and romantic appeal subscales might have not emerged because of the relevance of the items to Botswana's cultural context. It is not common for school going youths to do part-time jobs in Botswana because of the limited job opportunities. Therefore, most participants in the study wouldn't have identified with most of the items that anchor on job competence. With regard to romantic appeal, some participants might have been uncomfortable identifying themselves with most of the items on the subscale, mainly because discussions of sexual or romantic relationships with anybody outside the circle of friends, especially adults is still a taboo in Botswana culture. Responding to items about romantic relationships might have been perceived in that light.

In sum, the impact of the interdependent construal of the self on appraisal of one's competence in the various sub-domains suggested by Harter could not be ruled out with this sample. As observed by Markus and Kitayama (1991), when an interdependent construal of the self predominates, as it is the case in most collectivistic cultures such as Botswana, individuals

tend to view themselves as part of a social relationship. This is in contrast to the independent construal of the self, where self-conception is characterised by greater emphasis on the uniqueness of the individual. The wording of items on the SPPA instrument might have been perceived as mainly eliciting elements of the independent construal of the self, which would be construed as immodest in mainstream culture in Botswana. This could have affected the accuracy of the responses given and the lack of convergence of the original factors.

Although inconsistent with the design of the 9-factor SPPA instrument, the two-factor solution from the CFA was retained for the current study and used in further analyses of perceived competence on the basis that it would be informative to determine the extent to which the items on the SPPA could be applied in the assessment of perceived competence in Botswana. It was further reasoned that the extracted factors of Physical Appearance and Self-worth might lay the basis for future research on perceived competence that could be of importance to future studies examining competence motivation as it relates to involvement in achievement contexts in Botswana. It was also encouraging that the two extracted factors were significantly and positively correlated. This was in line with earlier findings by Harter (1988), where Physical Appearance and Self-worth were consistently and highly correlated, which as observed by Harter, suggested that one's attractiveness might be important to one's sense of self-worth.

Is perceived competence predictive of patterns of involvement in sport and physical activity?

The relationship between perceived competence and patterns of involvement in sport in this study revealed a complex picture. Contrary to the hypothesised relationship, physical appearance was not predictive of patterns of involvement in sport; instead it was Self-worth that separated between the three groups. This could be a reflection of the value placed on participation in sport and leisure physical activity by youths in this study. It could also be a reflection of the role sport and physical activities play in the youths' judgment of their general sense of adequacy or Self-worth. The fact that non-participants and recreational sport participants had higher Self-worth compared to the competitive sports group suggests that participation and achievement in sports context might not be considered important to judgments of global Self-worth. The general perception in Botswana, especially in school contexts, that participation in competitive sports is the domain of low-achievers is likely to instill a general sense of inadequacy among those involved in sport. Consequently, youths might underrate their sport achievements or ignore the contribution of such achievements when evaluating their general Self-worth. This finding also gives support to Harter's (1988) findings where athletic competence was lowly correlated to Self-worth compared to other factors.

The lack of significance for Physical appearance could be explained in terms of the trivialization of sports and physical activity as evidenced by the poor resources allocated to sports and the casual approach to the preparation of athletes in Botswana. Although the competitive and recreational sport participants had slightly higher means on Physical appearance than non-participants, such a difference was not significant; most likely because the groups would not perceive themselves to be distinct from each other on the basis of this factor.

Concerning effects for Region, it was surprising that rural youths had higher perceptions of Physical Appearance compared to urban youths. While it is hard to explain the difference, one wonders whether there could be a difference in the importance placed on body image between urban and rural youths in Botswana. It is likely that the culturally diverse urban environments have engendered in urban youths a greater awareness of the so-called ideal body image, which means urban youths might be tougher in their own evaluation of Physical Appearance. A comparative study of body image and physical self-perception between urban and rural youths is likely to produce interesting results.

In summary, this study reveals that the original factor structure of the SPPA proposed by Harter (1988) does not fit the current data from Botswana. Model modification yielded two factors, which were used in the analysis of perceived competence. The lack of fit for the model could have been because of the difficulty associated with the structured alternative instrument or what Marsh and his colleagues termed "model effects". It could have also been because of the poor cultural relevance of the various items on the scale. An examination of the effect of the extracted factors revealed that general Self-worth separated between the three groups with competitive sports participants reporting lower Self-worth compared to the other groups.

More research on competence motivation is necessary in Botswana and similar contexts to determine the role of self-perceptions on children and youths' involvement in achievement contexts and the impact of such judgments on persistence or withdrawal from achievements contexts. Such research will be particularly useful in the promotion of health through sport and physical activity as well as fostering academic achievement. Future studies could further test the SPPA and other models of perceived competence using various approaches so as to determine the validity of such models in African contexts. The use of cross-cultural frameworks might be best suited for developing tools that could best explain competence motivation in other cultures.

Although detailed explanations on how to complete the SPPA were given and assistance provided to individuals where necessary, difficulty in interpreting the items could not be ruled out. In particular, language difficulty or interference from the vernacular could not be ruled out. Notwithstanding the improper application of the SPPA and the lack of confirmation of the hypothesised relationship between perceived competence and patterns of involvement in sport, findings from this study support continued investigation of the theory of competence motivation in Botswana. The study lays the basis for more research aimed at model testing, model modification, and instrument development in an attempt to understand the concept of perceived competence in non-western cultures.

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