

## CROSS-CULTURAL VALIDATION OF HARTER'S SELF-PERCEPTION PROFILE FOR CHILDREN IN THE UNITED ARAB EMIRATES

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**Background:** Harter's Self-Perception Profile for children (SPPC) is a self-reporting inventory for ascertaining children's perception of themselves in various specific domains of their life, as well as their sense of global self-worth. A few studies have examined the psychometric properties of this instrument in the Western setting, but none have investigated this in an Arabic culture.

**Patients and Method:** Psychometric properties of the SPPC were examined, using a sample of 100 schoolchildren aged 8 to 16 years in the United Arab Emirates.

**Results:** The internal consistency reliability was found to be excellent with Chronbach's alpha, ranging from 0.86 to 0.92. Significant age and gender differences were found with the internal consistency reliability scores, being higher in children aged 13 to 16 years (0.88 to 0.93) when compared to younger children, especially boys aged 8 to 12 years (0.54 to 0.66), suggesting a need to exercise caution while using this scale in young boys in this culture. Behavioral conduct subscale was found to have the highest reliability score and the strongest correlation to global self-worth ( $r=0.54$ ) for both younger and older children in our sample. This is in contrast to findings from similar studies carried out on American and Dutch samples, where this subscale was found to have the lowest reliability score and the weakest correlation with one's global self-worth.

**Conclusion:** The findings indicate that the SPPC is a reliable and internally valid instrument for use in the Arab culture.

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**Key words:** Self-Perception Profile for Children, validity, Arab culture.

The Self-Perception Profile for Children (SPPC) is a 36-item self-reporting scale developed to tap children's domain-specific judgments of their competence, as well as a global perception of their worth or esteem as a person.<sup>1</sup> It contains six separate subscales consisting of five specific domains: 1) scholastic competence; 2) social acceptance; 3) athletic competence; 4) physical appearance; and 5) behavioral conduct, as well as a general domain of global self-worth. This scale was constructed on the assumption that an instrument providing separate measures of one's competence in different domains, as well as an independent assessment of one's global self-worth, would provide a more differentiated picture than those instruments providing only a single self-concept score.<sup>2,3</sup> Several authors have highlighted the problems faced in the measurement of self-concept in children,<sup>4,5</sup> and yet this is

an important aspect of a child's self-esteem and identity.

The SPPC can be used in clinical settings for measuring self-esteem and perceived competence in children. A parallel version is also available for use by other significant adult groups, such as parents, teachers or counselors,<sup>1</sup> which would enable comparison between self-esteem and competence, as perceived by the child and by other adults. The instrument has been successfully used in physically ill children<sup>6,7</sup> to understand more about their self-esteem and self-worth, as these are important determinants of psychosocial adjustment and adaptation in children with chronic physical illnesses.

Since the publication of the manual on SPPC,<sup>1</sup> which is a revised version of the Perceived Competence Scale for Children,<sup>8</sup> there has only been one published study in the international literature on its psychometric properties, which was conducted in a Dutch sample by Van Dongen-Melman et al.<sup>9</sup> Thus, to the best of our knowledge, this is the first study examining the validity of SPPC in a non-Western setting. The aims of this study were to investigate the multifactorial structure of the SPPC and its reliability and internal consistency, and to describe age and gender differences in the means of subscale scores and reliabilities.

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## Patients and Methods

A consecutive sample of 100 schoolchildren aged 8 to 16 years was enrolled in the study through the School Health Centre in Al-Ain. The Centre offers a routine health screening program, and the psychologist requested 100 consecutive children in the 8-to-16-year age group to complete the SPPC. The mean age of the total sample was  $11.81 \pm 2.76$ . There were 53 boys (mean age  $12.17 \pm 2.86$ ) and 47 girls (mean age  $11.40 \pm 2.60$ ). No statistical difference was observed for the ages between genders. There were 38 children in the older age group (13 to 16 years) and 62 children in the younger age group (8 to 12 years).

The SPPC was translated into classical Arabic, and a pilot study was performed with 32 children (aged 8 to 16 years, with eight respondents in each grade of 3, 5, 7 and 9). In order to overcome the children's tendency to give socially desirable responses, SPPC used a "structured alternative format." (For example, the child was first asked to decide which kind of "kid" was most self-representative, as in the statement, "some kids would rather play outdoors in their spare time," and then asked whether this was only sort of true or really true). Each item was scored from 1 to 4, where a score of 1 represented a low perceived competence and a score of 4 indicated a high perceived competence. A psychologist working at the site was available to monitor the children as they completed the questionnaire according to the given instructions. During collection, the questionnaires were checked for any missing information and for double scoring.

Several statistical tests were applied to test various parameters which were investigated in the study. Chronbach's alpha was used to test for internal consistency reliability. Differences between the means of ages for the different groups were tested using the Student's *t*-test. Correlation between the various parameters and specific domains of the scale were carried out using the correlation test (*r*). The ANOVA test with Bonferoni correction was used to test for variances between the subscales, with age and gender as independent factors.

## Results

### Factor Pattern

Since the particular domains of importance vary from individual to individual, and thus bear a different relationship to self-worth for different subjects, Harter suggested that self-worth is unlikely to emerge as a distinctive factor. Therefore, the factor pattern was tested only for the five specific subscales. For both younger and older children, each of the five specific subscales was found to define its own factor. On oblique rotation, the factor loadings for each subscale were found to be high,

TABLE 1. Internal consistency reliabilities (Chronbach's alpha) for all six subscales.

Subscale	Total samples (n=100)	Younger children (n=62)	Older children (n=38)	Boys (n=53)	Girls (n=47)
Scholastic competence	0.87	0.64	0.88	0.55	0.59
Social acceptance	0.86	0.58	0.89	0.54	0.89
Athletic competence	0.88	0.72	0.90	0.59	0.91
Physical appearance	0.90	0.65	0.92	0.61	0.92
Behavioral conduct	0.91	0.66	0.92	0.60	0.93
General self-worth	0.92	0.62	0.93	0.66	0.94

TABLE 2. Means and standard deviations of SPPC subscales in UAE, American and Dutch samples.

	UAE n=100	American n=210	Dutch n=300
Scholastic competence	2.06±.51	2.81±.69	2.81±.69
Social acceptance	2.30±.42	2.87±.77	3.08±.68
Athletic competence	2.36±.49	2.89±.73	3.07±.62
Physical appearance	2.15±.46	2.91±.76	3.16±.75
Behavioral conduct	2.15±.47	3.04±.56	2.89±.58
General self-worth	2.01±.47	3.04±.69	3.28±.59

TABLE 3. Subscale means and standard deviations for the subsamples by age and gender.

	Younger children (n=62)	Older children (n=38)	Boys (n=53)	Girls (n=47)
Scholastic competence	2.25±0.47	2.14±0.55	2.08±0.51	2.03±0.50
Social acceptance	2.25±0.41	2.40±0.43	2.29±0.38	2.32±0.46
Athletic competence	2.28±0.46	2.48±0.52	2.33±0.44	2.39±0.55
Physical appearance	2.08±0.44	2.25±0.47	2.26±0.48	2.02±0.41
Behavioral conduct	2.17±0.52	2.13±0.39	2.14±0.46	2.17±0.49
Global self-worth	1.95±0.46	2.10±0.47	2.09±0.50	1.92±0.42

with the range of average cross-loadings across factors being between 0.06 and 0.09.

### Internal Consistency Reliability

For the total sample, the internal consistency reliability was found to be excellent, with Chronbach's alpha ranging from 0.86 to 0.92. Of the subscales, the behavioral conduct scale revealed the highest reliability (0.91), closely followed by physical appearance (0.90). The lowest reliability score was found for the social acceptance scale, with a Chronbach's alpha of 0.86, followed by scholastic competence scale with a reliability score of 0.87.

### Age and Gender Effects

The internal consistency reliabilities for all subscales (including general self-worth) for boys and girls, as well as for younger and older children, are presented in Table 1. Higher reliability scores were observed in the older age group (range 0.88 to 0.93) when compared to younger children (range 0.58 to 0.66). Similarly, the subscale alphas were found to be higher in girls (range 0.89 to 0.94) when compared to boys (range 0.54 to 0.66). This could suggest that there is a need to exercise caution when using this scale in younger boys in this culture.

Means of the subscale scores for our sample ranged from 2.01 for general self-worth to 2.36 for athletic competence (Table 2).

*Age and Gender Effects*

The means of the subscale scores and standard deviations for the younger and older children, as well as those for boys and girls, are presented in Table 3. A two-way analysis of variance (ANOVA) was performed, with age and gender as independent factors. After the Bonferoni correction, gender effect was significant only for the subscale physical appearance. Similarly, age effect was significant only for the subscale social acceptance, after Bonferoni correction. No significant interactions were found.

*Intercorrelation Among Subscales*

The subscale intercorrelations for age and gender are presented in Table 4. There was a general tendency for scores to be more highly related among the adolescents compared to the younger children. The only exception was that among younger children, scholastic competence tended to be related to behavioral conduct, indicating that children who feel they are good at schoolwork report that they are well behaved. However, it was not strongly related among the adolescents, and it would appear that behavior becomes less relevant to one’s scholastic competence as one moves into adolescence.

The correlation among each specific domain and self-worth are also of interest. For both samples, behavioral conduct is the subscale which is best related to self-worth ( $r=0.54$ ). For adolescents, physical appearance was almost equally important ( $r=0.51$ ) to one’s sense of self-worth. Thus, while behavioral conduct was important in determining self-worth in younger and older children alike,

it was found that physical appearance was also an important factor for the older age group.

The correlation between specific domains and general self-worth showed that for boys, the strongest correlation (0.53) was between general self-worth and behavioral conduct. The weakest correlation was between social acceptance and general self-worth, closely followed by athletic competence. Girls on the other hand, showed highest correlation between general self-worth and physical appearance (0.66), followed by scholastic competence (0.55). Similar to the finding in boys, the weakest correlation (0.14) was with social acceptance. The intercorrelation among the subscales for boys and girls revealed a high correlation between physical appearance and scholastic competence (0.73) for girls, and a moderate correlation between physical appearance and behavioral conduct (0.57) for boys.

**Discussion**

The first aim of this study was to investigate the multi-factorial structure of the SPPC in a non-Western setting. The findings of our study confirm that each of the five specific subscales defines its own factor and that the cross-loadings across factors is low. The second aim was to investigate the reliability and internal consistency of the SPPC scales. It was found that the internal consistency reliability was excellent for the total sample, with Chronbach’s alpha ranging from 0.86 to 0.92. Furthermore, comparisons were made between our results and those of similar studies carried out in an American sample of 210 3rd to 6th grade children<sup>1</sup> and a Dutch sample of 300 school-aged children.<sup>9</sup> Using the Student’s *t*-test, the means of subscale scores for our sample were compared with those of the American and Dutch samples. UAE children had lower scores, indicating a lower perceived competence in all the areas (Table 2). The differences between our sample and both the American and the Dutch samples were significant for all the scales. A similar comparison made between the Dutch and the American samples found higher perceived competence in the Dutch sample on social acceptance, athletic competence, physical appearance and general self-worth, while the American children scored higher on behavioral conduct.<sup>9</sup> Of the subscales, behavioral conduct revealed the highest reliability score in our sample, which is in contrast to the American and Dutch studies, both of which showed the lowest reliability score for this subscale.

With regard to the domains important for the child’s self-worth, behavioral conduct was found to be best related to self-worth for both younger and older children. For the adolescent group, physical appearance was found to be almost equally important to one’s sense of self-worth. This is in keeping with the results from both the American and Dutch samples, where physical appearance and global self-

TABLE 4. *Intercorrelations among subscales by age and gender.*

		Social acceptance	Athletic competence	Physical appearance	Global Behavior	self-worth
Scholastic competence	A	0.12	0.04	0.37	0.51	0.43
	B	0.14	0.25	0.43	0.27	0.40
	C	0.35	0.23	0.35	0.32	0.35
	D	0.30	0.27	0.73	0.55	0.35
Social acceptance	A		0.07	0.17	0.05	0.13
	B		0.37	0.21	0.25	0.24
	C		0.36	0.18	0.02	0.11
	D		0.16	0.30	0.18	0.32
Athletic competence	A			0.07	0.07	0.20
	B			0.32	0.14	0.24
	C			0.30	0.30	0.14
	D			0.30	0.20	0.39
Physical appearance	A				0.37	0.41
	B				0.50	0.54
	C				0.57	0.32
	D				0.30	0.66
Behavioral conduct	A					0.51
	B					0.54
	C					0.53
	D					0.52

A=younger children; B=older children; C=boys; D=girls.

worth showed the strongest correlation. However, the finding about behavioral conduct is in contrast to American and Dutch samples, where this subscale showed the weakest correlation with one's global self-worth. Thus, this seems to be unique to this culture and in contrast with the findings from the Western settings. This is in keeping with our observation that the manner in which an individual behaves is given great significance in this culture and hence is important to one's sense of self-worth.

The third aim of the study was to examine the effect of gender and age. It has been suggested in earlier studies by Granleese et al.<sup>10</sup> and Stigler et al.<sup>11</sup> that combined data do not represent the true pattern of self-perceived competence for either sex. In our study, it was found that boys' sense of self-worth was mainly determined by their behavioral conduct while for girls, the main determinant was physical appearance. Thus, these findings indicate that for girls, physical attractiveness is particularly important to their sense of self-worth, an observation also noted in the Dutch and American studies. However, the finding for boys is in contrast to the observations from the Dutch and American samples, where physical appearance showed the strongest correlation with global self-worth in both boys and girls. Furthermore, in the Dutch sample, scholastic competence in girls had the lowest correlation with global self-worth, while in our sample, it had the second highest correlation.

With regard to the effect of age, it is to be noted that our sample is not entirely comparable with that of previous studies, since the age group is somewhat different. Our sample consisted of children aged 8 to 16 years, while the other available studies mostly used children aged 8 to 12 years only.

While the SPPC was initially standardized for children aged 8 to 12 years, and a separate adolescent version was devised for use in older children, in this study we used the same version of SPPC for both children and adolescents. Our findings suggest better reliability of results for older children than for younger children. We also found higher reliability for boys compared to girls, which is similar to

the observations in the Dutch study. Perhaps there is a need to ensure that younger children, in particular boys, pay attention to instructions and practice a response under supervision before proceeding to complete the questionnaire.

The findings of this study confirm that SPPC is a reliable and internally valid instrument for use in this culture. Our findings also indicate the need for caution to be exercised with younger children in ensuring that they understand the way the questionnaire is to be completed. Future studies should address issues relating to children's self-perception over time and the validity of this scale.

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