Differentiated And Distinctive Self-Concept: An African Perspective

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The self-concept has been a feature of theoretical expositions and experimental studies for decades in social and behavioural sciences. Such an interest in this psychological construct clearly demonstrated that we have a concept which permeates all aspects of our lives, be it social relations, health, education, child development, social services, organizational settings, management, business and industry, sports and recreation, and the military. This means that, self-concept has not been an ephemeral topic that has just been raised but an enduring theme among psychologists and social scientists who were and are still interested in explaining and understanding human behaviour from the point of the behaving organism. The African contribution to the study of self-concept suggests how a more refined understanding of the relationship between context and the development of self might enrich the dialogue between ideas, methods and world views; this is to advance our understanding of how people develop a sense of themselves in relation to their cultural dynamics.

Shavelson, Hubner, and Stanton (1976) proposed that self-concept is a multifaceted and hierarchical construct. They suggested a possible model in which general self-concept is separated into academic and non-academic components. Academic self-concept is then divided into subject-matter areas while the non-academic component is divided into social, physical, and emotional self-concepts. This model is indicated in Figure 1.

Figure 1
The Hierarchical Structure Of Self-Concept Proposed By Havelson, Hubner, And Stanton (1976)
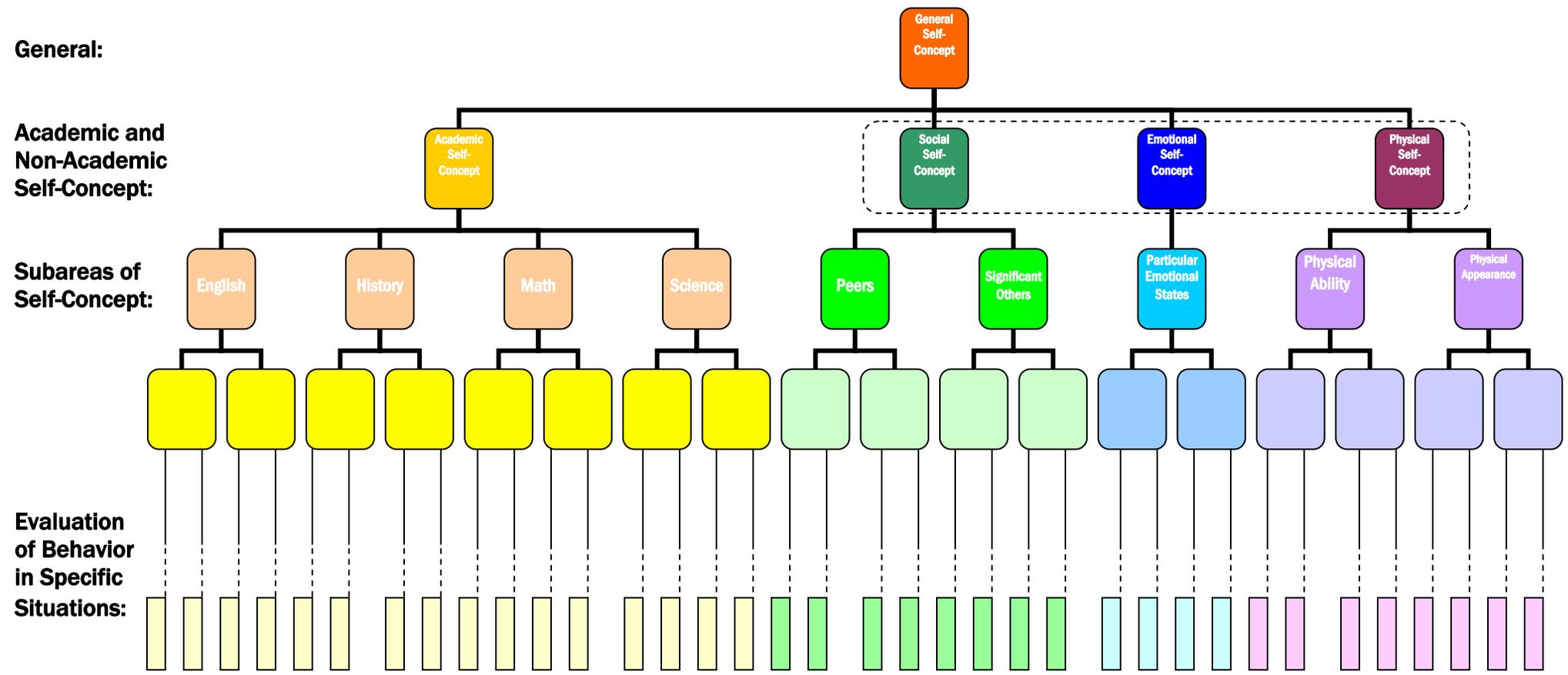
The hierarchical structure of self-concept proposed by Shaverlson, Hubner, and Stanton (1976). From "Self-concept: Validation of Construct Interpretations" by R.J. Shavelson, J.J. Hubner, & G.C. Stanton, 1976, Review of Educational Research, 46, p.413.

The growing body of research (Byrne, 1984, 1996; Eules, Wigfield, Harold, & Blumenfield, 1993; Hattie, 1992; Marsh, 1990, 1993; Marsh & Craven, 1997; Ruble & Dweck, 1995), largely stimulated by the original Shevelson et al. model, that supported the multidimensional structure of self-concepts as well as demonstrated that self-concept cannot be adequately understood if its multidimensionality is ignored, motivated the presented study from an African perspective.

Investigations have indicted that while self-concept is relatively undifferentiated for early adolescents it becomes increasingly multidimensional during adolescence. Marsh and Ayotte (2003) developed a differential distinctiveness hypothesis which proposes that while there is a differentiation of disparate areas of self-concept with age, there is an increasing integration of closely associated self-concept areas.

In the present study, the differentiation and distinctiveness of the self-concept of senior secondary school students were examined. It was hypothesized that (a) a multi-factor model provides a better fit of self-concept scores than does a three-factor model (academic, social, and physical) or a common-factor model and (b) average correlations within self-concept areas are greater than those between the areas.

Method

Sample

The sample considered in this study was a total of 880 senior secondary students in South Africa. Students were from seven secondary schools in the Western Cape Province. The schools are located in the working class

neighbourhood of the Province. The students were enrolled in Grades 8 (n = 296), 9 (n = 260), 10 (n = 202), and 11 (n = 122) and the M age = 18.9 yr., SD = 2.9 for the total sample.

Instrument: The SDI

The Self-Description Inventory (SDI) is designed to measure eight self-concept scales that are summarized in Appendix A. The schedule assesses the academic, social, and physical areas of self-concept with these components being defined by the subareas of ability and mathematics; family, school, and peer; and physical ability, appearance, and health, respectively. The SDI instrument takes about 30 minutes to administrator. The reliability and validity of the instrument have been established in a number of studies (e.g., Marjoribanks & Mboya, 1997; Marjoribanks & Mboya, 1998a; Marjoribanks & Mboya, 1998b; Marjoribanks & Mboya, 2001; Mboya, 1993, 1994, 1996, 1998, 1999).

Statistical Analyses

The factor structure of students' self-concept was examined using confirmatory factor analysis with the Amos 5 statistical programme (Arbuckle & Wothke, 1999). Initially, three measurement models were compared that proposed a differentiated eight-factor model (ability, mathematics, family, school, peer, physical ability, appearance, and health), a three-factor model (academic, social, and physical), and an undifferentiated common-factor model (all items loading strongly on one factor). The goodness of fit of these models was examined using the Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA), as these have been suggested as indices of choice when testing the adequacy of measurement models (Byrne, 2001;

Brockway, Carlson, Jones, & Bryant, 2002). A CFI above .95 indicates superior fit and an RMSEA of .08 represents reasonable errors of approximation in the population, while RSMEA values ranging from .08 to .10 indicate mediocre fit. Byrne (2001) cautioned, however, that fit indices "can in no way reflect the extent to which the model is plausible; this judgment rests squarely on the shoulders of the researcher" (p.88).

In the initial investigation of the 40 items, the three measurement models fitted poorly with the data. Items with low loadings on the underlying factors were then deleted from the analysis to explore the possibility of forming more adequate measurement models. It should be noted that the study was now framed within an exploratory rather than a confirmatory framework. Byrne (2001) observed "Although CFA procedures continue to be used in any re-specification and re-estimation of the model, these analyses are exploratory in the sense that they focus on the detection of misfitting parameters in the originally hypothesized model" (p.91).

RESULTS

From the re-specification and re-estimation, 30 items were found to have an acceptable fit on the hypothesized differentiated eight-factor model (CFI = .93, RMSEA = .03). In contrast, these items had a poor fit to the data on the three-factor model (CFI = .73, RMSEA = .06), and on the undifferentiated common-factor model (CFI = .68, RMSEA = .07). The results in Table 1 show the standardized factor loadings of the 30 items for the eight-factor model. These initial analyses provided support for the first hypothesis that in relation to other measurement models, a differentiated multi-factor model provides a better fit of self-concept scores for senior secondary school students.

TABLE 1

Item Loadings on Self-Concept Factors

				Factors				
Self-Concept Items	Academic Ability	Math-ematics	Family Relations	General School	Peer	Physical Abilities	Physical Appearance	Health
1. I get good marks in most school subjects.	.65							
2. I have the ability to understand the content of most school subjects quickly.	.41							

TABLE 1

Item Loadings on Self-Concept Factors

	Factors							
Self-Concept Items	Academic Ability	Math-ematics	Family Relations	General School	Peer	Physical Abilities	Physical Appearance	Health
3. I am good at most school subjects.	.61							
4. I am able to do all my schoolwork.	.44							
5. I am good at mathematics.		.75						

TABLE 1

Item Loadings on Self-Concept Factors

	Factors							
Self-Concept Items	Academic Ability	Math-ematics	Family Relations	General School	Peer	Physical Abilities	Physical Appearance	Health
6. I usually do well at mathematics.		.73						
7. Mathematics is easy for me.		.75						
8. I like to study mathematics.		.58						
9. My family understands me very well.			.48					

TABLE 1

Item Loadings on Self-Concept Factors

				Factors					
Self-Concept Items	Academic Ability	Math-ematics	Family Relations	General School	Peer	Physical Abilities	Physical Appearance	Health
10. My family loves me.			.68					
11. I feel I am an important member of my family.			.49					
12. I enjoy the time I spend with my family.			.59					

TABLE 1

Item Loadings on Self-Concept Factors

	Factors							
Self-Concept Items	Academic Ability	Math-ematics	Family Relations	General School	Peer	Physical Abilities	Physical Appearance	Health
13. I like my family.			.61					
14. I enjoy studying most school subjects.				.48				
15. The work I do at school is very important to me.				.59				
16. I look forward to going to school each day.				.47				

TABLE 1

Item Loadings on Self-Concept Factors

Self-Concept Items	Factors							
	Academic Ability	Math-ematics	Family Relations	General School	Peer	Physical Abilities	Physical Appearance	Health
17. I enjoy the time I spend in class.				.47				
18. It is easy for me to make friends.					.47			
19. I do not like to be with friends.					.46			

TABLE 1

TABLE 1

Item Loadings on Self-Concept Factors

			Factors					
Self-Concept Items	Academic Ability	Math-ematics	Family Relations	General School	Peer	Physical Abilities	Physical Appearance	Health
20. I enjoy spending time with friends.					.51			
21. I do well in sports and games.						.60		
22. I like to do physical exercises such as running.						.40		

TABLE 1

Item Loadings on Self-Concept Factors

	Factors							
Self-Concept Items	Academic Ability	Math-ematics	Family Relations	General School	Peer	Physical Abilities	Physical Appearance	Health
23. I am a good athlete.						.45		
24. I like the way I look.							.40	
25. I am satisfied with my appearance.							.45	

TABLE 1

Item Loadings on Self-Concept Factors

Factors

Self-Concept Items	Academic Ability	Math-ematics	Family Relations	General School	Peer	Physical Abilities	Physical Appearance	Health
26. I think I am good looking.							.44	
27. My health is poor.								.43
28. I am in good health.								.58
29. I have the energy to do a lot of things.								.40
30. I feel happy with the state of my health.								.51

Note – CFI = .93, RMSEA = .032 (90% confidence limits .028 to .035).

The distinctiveness hypothesis was examined by comparing the average correlations within self-concept areas with those between the areas. Although there are limitations associated with using average correlations, in the present study correlations were transformed into Fisher's z-function and then the means of the z's were calculated. The finds indicated that the average correlations within the academic, social, and physical self-concept areas were .30, .34, and .49, respectively. In contrast, the correlations between the self-concept areas were academic and social, .21; academic and physical, .28; and social and physical, .45. That is, no definite pattern of correlations emerged to provide support for the second hypothesis.

DISCUSSION

The analysis indicated that while there was a differentiation of self-concept areas there was not a definite pattern of distinctiveness within and between the self-concept scores. However, the study is limited by its cross-sectional and correlational design. What is required to test the hypotheses more completely are longitudinal investigations that examine the possible age-related nature of associations among self-concept scores.

The present study provides a refined self-concept scale that can be used to assess the multi-dimensional nature of self-concept for senior secondary school students in Africa. It is important that the scale be tested in other cultural contexts. As Marsh and Ayotte (2002) observed "Cross-cultural comparisons provide researchers a valuable, heuristic basis to test the external validity and generalizability of their measures, theories, and models" (p. 701).

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Appendix A

A Summary Description of the Self-Description Inventory (SDI) – Self – Concept Instrument

SCALES

Academic Ability (ACAB): This scale refers to individuals' perceptions of their ability and potential in school learning. Examples are, "I am able to learn the content of most school subjects", "In most school subjects I am not capable of getting good marks", and "I get good marks in most school subjects".

Mathematics (MATH): This scale refers to individuals' perceptions of their interest and enjoyment in learning Mathematics. Examples are, "I usually do well in Mathematics tests", "I hate Mathematics", and "Mathematics is easy for me".

Relations With PEERS (PERS): This scale refers to individuals' perceptions of their interaction with peers or friends. Examples are, "I am well liked by others of my age", "I find it difficult to make friends", and "I enjoy spending time with my friends".

General School (SCHL): This scale refers to individuals' perceptions of their interest in and enjoyment of school in general. Examples are "I enjoy the time I spend in class", "The work I do at school is very important to me", and "I would prefer not to go to school if I had a choice".

Relations With Family (FMLY): This scale refers to individuals' perceptions of their interaction with their family. Examples are, "My family loves me", "I feel my family does not care much about me", and "I like my family".

Physical Abilities (PHYS): This scale refers to individuals' perceptions of their skills and interest in sports and physical activities. Examples are, "I am a good athlete", "I so not enjoy sports and games", and "I am a leader in sports and games."

Physical Appearance (APPR): This scale refers to individuals' perceptions of their physical appearance. Examples are, "I am ugly", "I like the way I look", and "I am satisfied with my appearance".

Health (HLTH): This scale refers to individuals' perceptions of their physical well-being. Examples are, "I am in good health", "I am not physically fit", and "I feel happy with the state of my health".