Facilitating Children's Self-Concept: A Rationale and Evaluative Study

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This study reports on the design and effectiveness of the Exploring Self-Concept program for primary school children using self-concept as the outcome measure. The program aims to provide a procedure that incorporates organisation, elaboration, thinking, and problem-solving strategies and links these to children's multidimensional self-concept. The results of this research support the notion that teachers and guidance counsellors need to establish a nonthreatening framework that allows them to discuss with children a range of relevant issues related to peer pressure, parent relations, self-image, body image, gender bias, media pressure, values and life goals, in a systematic, objective and cooperative manner. Within the paper, notions associated with self-concept maturation, 'crystallisation' of self-concept beliefs, cognitive differentiation and self-concept segmentation are reviewed.

This research concentrates on how children form their self-concept and on an intervention program called Exploring Self-Concept, designed to facilitate the development of primary school children's self-concept. The program aims to be proactive and preventative, helping to empower children with strategies and insights to enhance their self-concept, their understanding of their social environment, and their wellbeing.

The contemporary understanding is that self-concept is a multidimensional construct (Byrne, 1996; Hay & Ashman, 2003; Marsh, Craven, & McInerney, 2003). Self-concept helps individuals to understand their social environment and guide their future behaviours (McCombs & Marzano, 1990). It is considered an important construct within education because of its links to students' motivation, achievement, confidence and psychological wellbeing (Hay, 2000; Schunk, 2004). For example, Hay, Ashman and van Kraayenoord (1997) identified that students with low self-concept test scores, when compared to their peers with high self-concept scores, had less positive classroom characteristics in the domains of classroom behaviour, cooperation, persistence, leadership, anxiety, expectations for future schooling, and peer interactions.

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Self-concept is thought to be a relatively stable variable formed within an individual's social environment and based on feedback from significant others and by self-evaluation (Byrne, 1996; Hay, Ashman, & Van Kraayenoord, 1998a). Self-concept stability also refers to the ease or difficulty of changing an individual's self-concept belief. Pajares and Schunk (2002) claimed that the stability of a self-belief is dependent on its level of structure or 'crystallisation'. Beliefs become crystallised with development and the repeat of similar experiences producing similar outcomes. Adolescents have relatively well structured perceptions of themselves in domains such as intelligence, sociability and sports. New information not consistent with an individual's usual self-concept beliefs is more likely to be disregarded and challenged (Hay, 2002; Hay, Ashman, van Kraayenoord, & Stewart, 1999). Children's self-concepts are thought to be modified more easily, as are the self-concepts of individuals with poorly formed notions about themselves (Pajares & Schunk, 2001).

Children's maturing cognitive and language competencies play a role in the formation of their self-concept. Young children's self-concepts are considered to centre on behaviours and concrete characteristics, while those of older children are focused on more abstract characteristics (Harter, 1990; Montemajor & Eisen, 1977). Young children usually define themselves in terms of their appearance, actions, and possessions and have difficulty distinguishing between different domains and actions. To illustrate this, if a young child is asked, 'Are you a good reader?' he or she may say 'yes', even if that child cannot read. The child is having difficulty differentiating 'I like reading' and 'I like being read to' from 'I am successful at reading'. Young children do not have an enduring sense of themselves across these different dimensions because their self-concepts are diffused and loosely organised (Pajares & Schunk, 2001; Schunk, 2004). As children develop they acquire a more abstract view of themselves based on observations and feedback on their own performance, and from feedback from teachers, parents and peers (Hattie, 1992; Hay, Ashman, & Van Kraayenoord, 1998b). Thus, as children develop they are better able to separate their underlying traits and abilities, so their self-concepts become more organised and complex. In particular, as individuals develop and cognitively mature they are better able to contain a negative experience in one self-concept domain, without transferring it to other domains. For example, a poor mark on an algebra test is not likely to influence a high school student's reading self-concept, and the student can compartmentalise the poor grade to one area of mathematical self-concept, rationalising 'I am poor in algebra, but my mathematics knowledge in geometry is good'. This increased segmentation is associated with a more positive general self-concept and greater psychological wellbeing.

Harter's research also provides evidence of changes in children's self-concept over time. She reported that as children develop their self-concepts become more differentiated (Harter, 1990), identifying six self-domains in late childhood and an additional three associated with adolescence. In response to social and community feedback, children in middle to upper primary school grades report their most desirable self-attribute as physical appearance, followed by social acceptance and scholastic competence (Harter, 1996). In addition, Harter asserted that self-concept was determined by an individual's achievement within a domain and the relative importance placed on that domain by the individual.

The indications are that self-concept, conflict resolution skills and problem-solving skills are linked. Pianta and Walsh (1996) argued that students with low self-concepts had low educational aspirations, and were associated with having poor planning skills, generating fewer constructive alternative solutions to problems, tending to converge on short-term outcomes rather than long-term goals, recognising fewer consequences associated with their behaviours, and being less sensitive to interpersonal conflict.

Hay (1992, 1995) maintained that when the aim of an intervention is to enhance students' self-concept, strategies need to be designed that encourage students to use reflective thinking. The claim is that reflective thinking helps the students to place their successes and failures in context and to compare their performances to a realistic reference group and measure. Following this line of argument, Lockhart and Hay (1995) demonstrated an improvement in self-concept for adolescent students using activities that incorporated planning, verbalisation and reflective thinking skills. This approach strove to address concerns associated with past self-concept interventions, where isolated 'enhancement activities' did not transfer into new self-perceptions, motivational beliefs, or changed student behaviours (Hattie, 1992).

Using a multiple time-series design, Hay, Byrne and Butler (2000) further evaluated an intervention study with high school students with low self-concepts and social difficulties. At the completion of this intervention, Hay et al. identified changes to specific self-concept dimensions relevant to the intervention and these changes were maintained over time. In the Hay et al. (2000) research the intervention program was called ABLE (Attribution, Behavior, Life skills Education) and it incorporated the cognitive skills of problem-solving, reflection, verbalisation, and conflict resolution. The framework for this program was Marsh's (1990) model of adolescence self-concept. The adolescents in the Hay et al. study made significant improvements in the areas of general self-concept, physical appearance self-concept and total self-concept. It is suggested that by having the students in the *ABLE* program reflect on each of Marsh's (1990) 11 adolescent self-concept domains, in relation to their own experiences and performances, it helped to facilitate the formation of a more complex and differentiated self-concept for the participants.

While programs such as *ABLE* demonstrate effectiveness in enhancing adolescents' self-concept, the question is: What will be effective with primary school students? The research opinion is that as children develop, their self-concepts become more differentiated and segmented and this process is facilitated by experience and reflective thinking (Hattie, 1992; Schunk, 2004). Consequently, if one wishes to develop an intervention program to facilitate primary school children's self-concept, it would need to be sympathetic to the children's language and comprehension abilities. It would also need to concentrate on enhancing the children's thinking skills along with self-concept enhancement.

The challenge is how to develop children's self-concept in a nonthreatening way and within a thinking skills framework. In terms of a thinking framework the four most common cognitive schemata, and organisational and thinking strategies are: listing/sequencing; compare/contrast; cause and effect; and problem solution (Bartlett, 2003; Bos & Vaughn, 2002; Schunk, 2004). These four prototypical cognitive schemata can help the child to elaborate on the new information and so facilitate its link to existing concepts already held in long term memory. Therefore, the

four schemata have the potential to help increase a child's self-concept differentiation and assist in the process Schunk (2004) called 'crystallisation' of a child's self-concept though elaboration, discussion and reflection. In the Hay et al. (2000) research, Marsh's (1990) adolescence multidimensional self-concept framework was used with the ABLE program. In the present research Marsh's (1988) children's multidimensional self-concept framework, along with the four cognitive schemata will be the foundation of this study into the design and evaluation of an intervention program called Exploring Self-Concept (Hay, 2004). This research aims to investigate the effectiveness of the Exploring Self-Concept program with primary school children using Marsh's (1988) *Self-Description Questionnaire* as the outcome measure.

Method

Participants

Permission to conduct the program and its evaluation with the participating children was given by the principal of the school and the children's parents. The children were drawn from a nongovernment, primary, co-educational school located in Brisbane, Australia. Based on census data the school drew the majority of its 280 students from middle to lower socioeconomic areas. The Exploring Self-Concept program was introduced to the children as a problem-solving program and participation was voluntary. Because of the size of the school all Year 6 students in two classes were invited to participate (N = 35, 16 girls and 19 boys). The average age of the children was 11 years seven months at the start of the intervention.

Instruments

Self-Description Questionnaire-1 (SDQ-1). This 76-item test was developed by Marsh (1988) to measure self-concept in four nonacademic areas (physical abilities, physical appearance, peer relations, and parent relations), three academic areas (reading, mathematics, and general school) and general self (the rearranged Rosenberg, 1965, General Self-Esteem scale). Children are asked to read declarative sentences (e.g., 'I'm good at mathematics', 'I make friends easily') and select one of five alternative responses: *false*, *mostly false*, *sometimes false/sometimes true*, *mostly true* or *true*. The norms are based on a sample of 3562 New South Wales (Australia) students. The *SDQ*-1 was administered in a class group situation, with the presentation taking about 15 minutes. Marsh reported an internal reliability coefficient of .92 for the full scale score and a test–retest reliability coefficient of .87 over a 6-month period. The children's raw scores were recorded in this study. The *SDQ*-1 has been noted for its strong psychometric and theoretical construct characteristics and has been identified as a reliable and valid instrument for use in clinical and research settings (Keith & Bracken, 1996).

Exploring Self-Concept program. For each of Marsh's (1988) eight self-domains the children complete a series of structured small group or individual activities focusing on listing/sequencing, compare/contrast, cause and effect, and problem solution. Thus, there were eight lessons on each of the following topics: physical abilities, physical appearance, peer relations, parent relations, reading, mathematics, general school and general self. The Exploring Self-Concept program (Hay, 2004) was writ-

ten for teachers and counsellors, providing information about the aims of each lesson, stating the questions to be asked and the activities to be undertaken. Each lesson was planned to be completed in about 60 minutes.

Procedures

The duration of the program was 10 consecutive weeks involving eight theme lessons plus one introduction and conclusion lesson. Because of the amount of oral discussion and writing associated with the Exploring Self-Concept program it was included as part of the children's regular Language Arts program. The researcher, along with an experienced teacher, conducted all sessions. The children's self-concepts were assessed at the start of the intervention and again at the conclusion using the *SDQ*-I. Due to the stability and multidimensional nature of self-concept only those specific aspects of the children's self-concept profiles most relevant to the Exploring Self-Concept intervention should be affected, while less relevant dimensions should be less affected and so serve as a control for postgroup-euphoric effects (Marsh, 1990).

Results

The statistic, Cohen's effect size (*d)* is recommended for intervention studies where the sample size is small and repeat data are being collected (Cohen, 1988). Effect sizes above 0.3 are considered to be meaningful and significant, and the Cohen's *d* is the basic statistical procedure used in comparative meta-analysis research (Best & Kakn, 2003). The children in this study made significant improvements at the end of the intervention in: physical appearance, general school, total nonacademic and total self-concept (see Table 1). In addition, the children also made moderate improvements in general self, peer relationships and reading self-concept.

TABLE 1

Effect Size Comparison of Pre and Post Test SDQ-1 Scores for the Exploring Self-Concept Intervention, *N* = 35

SDQ-1 Self-concept Domain	Pre intervention test		Post intervention test		Cohen's *d*	Cohen's (1988) standard of significant difference
	mean	*SD*	mean	*SD*		
Physical ability	32.3	4.9	33.3	5.9	0.18	small
Physical appearance	27.1	5.6	28.0	6.3	1.05	large
Peer relationships	28.7	5.4	31.0	6.1	0.52	medium — large
Parent relationships	33.7	4.6	34.9	5.8	0.23	small
Reading	29.7	6.4	31.1	6.4	0.40	medium
Mathematics	27.1	7.1	28.9	7.2	0.27	medium
General school	27.6	4.2	30.2	4.8	0.58	large
General self	31.0	4.3	33.8	5.2	0.51	medium — large
Total Nonacademic	31.1	3.7	32.5	4.4	0.34	medium
Total academic	28.2	4.1	30.2	4.8	1.11	large
Total Self-concept	30.1	2.7	31.3	3.2	1.23	large

Discussion

In this study the participating children improved in the self-concept domains of general school, general self, peer relationships, and physical appearance. In the *SDQ*-I, general self refers to items such as 'I feel that my life is very useful' and physical appearance self-concept refers to items such as 'I have a good looking body'. General self-concept, peer relationships and physical appearance are linked to students' level of confidence, social skills, and self-worth (Hattie, 1992). Harter (1996) maintained that for children, physical appearance is a highly desirable self-attribute and higher scores in this domain are linked to more positive perceptions of self and higher levels of social competency and social confidence. The improvement in general school self-concept may reflect the amount of positive feedback the children received doing the program, but it may also illustrate that through discussion the children were able to place their school performance in a better perception. In this research the children's academic and total self-concept scores were enhanced. Overall, the results of this investigation support the idea expressed by Johnson and Johnson (1996) that teaching students thinking and problem-solving skills has a positive influence on their self-concept formation.

There is a growing awareness of the need for strategy training programs that are more 'user friendly' to classroom teachers and counsellors with limited time and resources to design the necessary intervention and extension programs (Hughes & Hall, 1989; Loughran, Mitchell, & Mitchell, 2002). There is also the need to evaluate whether such programs are effective in regular school settings (Best & Kakn, 2003; Mertens & McLaughlin, 2004). Given this, the intervention provides a procedure that incorporates organisation, elaboration, thinking, and problem-solving strategies and links these to children's multidimensional self-concept. While additional research is still required with the Exploring Self-Concept program, the results of this research support the notion that teachers and guidance counsellors need to establish a non-threatening framework that allows them to discuss with children a range of relevant issues related to: peer pressure, parent relations, self-image, body image, gender bias, media pressure, values, and life goals, in a systematic, objective and cooperative manner. In part, such interactions and frameworks aim to be proactive and preventative, helping to empower children with strategies and insights to enhance their self-concept, their understanding of their social environment, and their wellbeing.

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