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The Relationships Between Domain-Specific Self-Concepts and Global Self-Esteem Among Adolescents in Taiwan

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ABSTRACT

The primary purpose of this study is to investigate the relationships between adolescents' global self-esteem and domain-specific self-concepts in Taiwan. Using Chinese Rosenberg Self-Esteem Scale (CRSES) and Chinese Self-Description Questionnaire-II (CSDQ-II), 591 participants from the junior and senior high schools in Taiwan reported their perceptions of global self-esteem and self-concept. Correlation, multiple regression analysis and analysis of variance (ANOVA) were applied to the data. The major findings were as follows: (a) the correlation coefficients among the factors of CSDQ-II and the CRSES were statistically significant; (b) 6 specific domains of self-concept (i.e., math/school, verbal, physical appearance, emotion, parent relations and peer relations) made a significant contribution to predict adolescents' global self-esteem; (c) gender and age differences had an impact on adolescents' perception to domain-specific self-concepts; (d) a significant two-way interaction between grade and gender was found on the factor of peer relationships.

KEY WORDS : domain-specific self-concepts, gender, grade, self-description questionnaire, self-esteem

The constructs of self-concept and self-esteem have been a topic of great interest in the field of psychology and educational research, and they have been shown to have a pervasive impact on human behavior (Wylie, 1979). A positive self-concept or an adequate self-esteem is central to an individual's mental health and adaptive functioning (Chan & Lee, 1993). General, the assessment of adolescent self-esteem or self-concept has been regarded as an important and necessary step to understand the adolescent's individual psychology and development (Rice, 1990).

Although the definitions of the terms, self-esteem and self-concept, could be used interchangeably by some researchers who have conducted studies in Western culture (Pelham & Swann, 1989; Shavelson, Hubner, & Stanton, 1976), Watkins and Dhawan (1989) noted that self-concept and self-esteem couldn't be used interchangeably in non Western societies such as China, Hong Kong, and Taiwan. They defined self-concept as someone's perception about him/herself, without involving judgement of worth, a definition which was similar to Hoelter's (1985). The term, self-esteem, is referred to as self-respect in Chinese, which pertains more to self-evaluation than self-description. The distinguished definitions between self-concept and self-esteem were adopted in this study.

Historically, self-concept has been conceptualized as a unidimensional construct or a global measure in the early definitions (Coopersmith, 1967; James, 1890; Rosenberg, 1965). However, more recently, self-concept has been recognized as a multidimensional construct, which consists of various specific dimensions of the self that reflect an individual's multiple roles and experiences (Marsh, 1990a). In general, previous research studies on self-concept among Chinese adolescents have been restricted to the use of a global measure (Chan & Lee, 1993; Huang, 1971) and to a focus on the correlation of self-esteem and self-esteem development (Chan & Lee, 1993; Lau & Cheung, 1987). Over time, the importance of assessing the multidimensionality of self-concept has been recognized; however, few studies have been designed to specifically address the relationships between domain-specific self-concepts and global self-worth among Chinese adolescents.

Most of the research that has been focused on self-concept was carried out in Western countries, particularly in North America and Australia. Watkins and Dhawan (1989) pointed out that people from different cultures tend to think about themselves in specific ways. For example, people from Western cultures tend to have an individualistic self-concept, with the emphasis on individual characteristics and achievement. However, those from non-Western cultures tend to report a collectivistic self-concept, in which the person does not think about him/herself so much as an individual, but rather in terms of relationships with other people (e.g., as a daughter or husband; Chan, 1997). Hence, the findings in Western culture about self-esteem may not be generalized to non-Western cultures.

In contrast to Western culture, Chinese socialization is characterized as a social orientation, and the Chinese people's behavior in social situations is guided by the social norm and the internalized representation of external expectation (Yang, 1981). Undoubtedly, the Chinese practice of socialization and their social obligations influence the youth's self-concept, because a person's self-concept is intimately tied to social conformity, social expectation, and an attempt to obtain rewards or to gain access to desired resources (Hamid & Cheng, 1995). Therefore, it is obvious that Chinese adolescents' self-concepts are usually associated with satisfactory relationships with significant others (e.g., parents, other family members, friends, or teachers), and meeting others' expectations (Wu, 1998).

Purpose of the Study

The purpose of this study was to assess the relationships between domain-specific self-concepts and global self-esteem by use of Rosenberg's Self-Esteem Scale (RSES; 1965) and the Self-Description Questionnaire-II (SDQ-II; Marsh, 1990b) with junior and senior high school students in Taiwan. Also, this researcher examined the gender and grade differences in the proportion of variance in self-esteem accounted for by different domain-specific self-concepts.

The results of this study were to inform teachers, parents, and school counselors to become aware of the relationships between specific self-concepts and global self-esteem in adolescents. Also, this information might help teachers and parents develop interventions and programs for those adolescents with self-esteem problems.

Research Questions

Explored in this study were the relationships between adolescents' domain-specific self-concepts and global self-esteem in Taiwan and the differences based on different grade and age groups. The research questions which guided this study were:

1. What are the relationships between domain-specific self-concepts and global self-esteem among adolescents in Taiwan?
2. Are there gender differences in domain-specific self-concepts among adolescents in Taiwan?
3. Are there grade differences in domain-specific self-concepts among adolescents in Taiwan?

Review of the Literature

This review of literature was conducted to understand the definitions of self-esteem and self-concept, to clarify approaches and related research of unidimensional and multidimensional self-concept or self-esteem, and to identify the factors that influence multidimensional self-concept and global self-esteem.

Definitions of Self-Esteem

James (1890) expanded on his theory of the self and provided one of the earliest definitions of self-esteem. He defined self-esteem as a unidimensional construct that was related to how a person felt about him/herself. Cooley (1902), a sociologist, provided the notion of the looking-glass self, that is, self-esteem is dependent upon one's perception of what significant others thought of him/her. Also, Mead (1934), another sociologist, stressed the importance of others in relation to

self and maintained that one could try to understand the self from social interactions.

The next major advance in the definition of self-esteem was provided by Rosenberg (1965), who based his definition of self-esteem on James' concept. According to Mruk (1995), Rosenberg made three contributions to the definition of self-esteem: (a) self-esteem includes both an affective and a cognitive component; (b) self-esteem has an evaluative component; and (c) self-esteem is not only personal and psychological, but also includes social interaction. It was Rosenberg's position that self-esteem involved not only feelings but, also, cognitive conceptualizations and perceptions.

Similar to Rosenberg's (1965) view of self-esteem, Coopersmith (1967) defined it as how one made an evaluation about him/herself. He added the term, worth, and associated self-esteem with both worth and evaluation which are personal and powerful aspects of the construct. Coopersmith was the first to develop an instrument designed to measure the construct of self-esteem, the Self-Esteem Inventory (SEI). The development of the SEI made self-esteem a more objective and measurable construct.

In general, self-esteem has been defined as self-evaluation, and researchers have viewed it as an affective part of the self, that is, the individual's regard about his/her own worth (Brandon, 1969; Coopersmith, 1967; Daly & Diesel, 1992; Rogers, 1951). Byrne (1996) noted that terms used interchangeably with self-esteem were self-regard, self-reverence, self-acceptance, self-respect, self-worth, self-feeling, and self-evaluation.

Definitions of Self-Concept

In general, self-concept has been defined as self-description without involving judgment of worth. It was viewed as a cognitive part of the self by Hoelter (1985) and Watkins and Dhawan (1989). Rosenberg (1979) regarded self-concept as not a real self, but rather the picture of the self. He defined self-concept as "the totality of the individual's thoughts and feelings having reference to him[her]self as object" (p. 7). In Rosenberg's definition, self-concept not only included cognitive components but affective ones, also. Similarly, Pelham and Swann (1989) reported that self-concept had relatively independent cognitive and affective components which supported Rosenberg's definition.

Self-concept was broadly defined by Shavelson, et al. (1976) as a person's self perceptions formed through one's experience and interpretations with his/her environment. The individual is influenced especially by evaluations from significant others, reinforcements, and attributions for one's own behavior. Their definition provided a clear and concrete description of self-concept and indicated that self-concept included not only a self-description component but also self-evaluation. Byrne (1996) pointed out that terms used interchangeably with self-concept were self, self-estimation, self-identity, self-image, self-perception, self-consciousness, self-imagery, and self-awareness.

The Distinction Between Self-Esteem and Self-Concept

Self-concept and self-esteem have been the subjects of research in the field of education and psychology over the past several decades. Many researchers have claimed that there was no

difference between self-esteem and self-concept (Pelham & Swann, 1989; Shavelson et al., 1976). As noted by Shavelson et al., “The distinction between self-description and self-evaluation has not been clarified either conceptually or empirically. Accordingly, the terms self-concept and self-esteem have been used interchangeably in the literature” (p. 414). Also, Marsh, Byrne, and Shavelson (1988) suggested that self-esteem and self-concept could be used interchangeably based on the lack of empirical and theoretical evidence to support the differences between these two terms.

According to Grant (1998), some researchers have made a distinction between self-esteem and self-concept, but most of them view self-esteem as included under self-concept. Elliott (1986) identified self-esteem as the dimension of self-concept related to self-evaluation. Iheanacho (1988) pointed out that, although both self-concept and self-esteem were related self-concepts, they differed, because self-esteem was the affective part of the self, and self-concept was the cognitive portion of the self. Watkins and Dhawan (1989) found that differences existed within self-concept and self-esteem in non-Western societies. They supported the idea that there was a distinction between self-esteem and self-concept. The term, self-esteem, could be limited to the evaluative aspects of the self, and the term, self-concept, could then be used for all self-descriptions which do not necessarily involve judgements of worth.

Shavelson, Hubner, and Stanton's (1976) Model

In the last decade, self-concept has been recognized as a multidimensional construct. Self-concept consists of various specific dimensions of the self that reflect an individual's multiple roles and experiences (Marsh, 1990a).

The first multidimensional model of self-concept was presented in 1976 by Shavelson et al.. This model has become the foundation for the study of self-concept. Shavelson et al. reported that self-concept was not an entity within the person, but a hypothetical construct that was potentially useful in explaining and predicting how a person acted. These self-perceptions influenced the way s/he acted, and these acts in turn influenced the person's self-perception. Their definition provided a clear and concise description of self-concept. The most important contribution by Shavelson et al. was to set up an outline of the essential features of self-concept (Boan, 1998), which they considered as important components in understanding self-concept.

Seven Features of Self-Concept

Shavelson et al. (1976) identified seven features that were critical to their definition of the self-concept construct:

1. Self-concept is organized or structured. This means that an individual categorizes his/her experiences and relates these categories to one another.
2. Self-concept is a multifaceted construct. The facets of self-concept are representative of the category system adopted by the individual or by a particular group of individuals.
3. Self-concept is hierarchical. This hierarchy is structured so that the base is a very specific self-concept while the general self-concept is at the top. The general self-concept consists of two divisions, the academic self-concept and the nonacademic self-concept. The academic self-concept

can be split into specific subject areas and then further into areas within a subject. The nonacademic self-concept can be broken down into social and physical self-concepts, which can be divided into specific area.

4. The characterization of the general self-concept can be viewed as a stable construct. As one descends the hierarchy, self-concept became increasingly situation specific and, as a consequence, less stable.

5. The construct is developmental. An individual's self-concept becomes more differentiated as s/he increases in age.

6. Self-concept is evaluative. That is, it has both a descriptive and an evaluative aspect. An individual does not just describe him/herself but, also, makes an evaluation of him/herself in a particular situation.

7. Self-concept is differentiable from other constructs. For example, academic achievement should be more highly correlated with academic self-concept than with social or physical self-concept.

The Structure of Self-Concept

Shavelson et al. (1976) proposed a general self-concept at the apex of the hierarchy that was divided into academic and nonacademic self-concepts. Academic self-concept was further divided into subject-specific facets of self (e.g., English and mathematics); nonacademic self-concept was divided into social, emotional, and physical self-concepts that were further divided into more specific components (e.g., physical self-concept into physical ability and physical appearance). When Shavelson et al. proposed their model, there was little empirical support for the multidimensionality of self-concept, but subsequent empirical research did support it (Dusek & Flaherty, 1981; Marsh & Shavelson, 1985). In reviews of these research, Marsh, Byrne, and Shavelson (1988) concluded that self-concept could not be adequately understood if this multidimensionality was ignored.

Marsh and Shavelson (1985) tested the original Shavelson model with responses by Australian elementary school children to the SDQ-I. They found the hierarchy to be more complicated than anticipated. In particular, verbal and math self-concepts were nearly uncorrelated with each other and did not combine with the general school self-concept to form a single, second-order academic factor. Instead, they supported the division of the general self-concept into a nonacademic self-concept, an academic English self-concept, and an academic mathematics self-concept. This revision of the original model was called the Marsh-Shavelson revision. Marsh, et al. (1988) further tested their revised model and found that the pattern of correlations among the factors was consistent across responses to different self-concept instruments and supported the Marsh-Shavelson revision.

Relationships Between Self-Concepts and Esteem

Some studies have revealed positive relationships between specific elements of self-concept and global self-esteem. Marsh (1986) found that students' specific self-concepts correlated at better than .69 with global self-esteem. The findings demonstrated that a subject's self-concept in a

specific area was moderately correlated with his or her perceived importance of the area, and also strong tendency with his/her high self-esteem. Rosenberg (1979) reported similar finding that individual with high self-concept in particular facets would attach higher importance to these facets and that this mechanism would allow individuals to enhance or protect their esteem. That is, when the level of specific self-concept was more positive, the positive contribution to global self-esteem was larger.

METHOD

Participants

The sample for this study was composed of 591 junior and senior high school students in Taipei, Taiwan; there were 316 males and 275 females. At the time of the study, participants were enrolled in the ninth grade, age 15 (i.e., equivalent to third year students in junior high school in Taiwan); tenth grade, age 16 (i.e., equivalent to first year students in senior high school in Taiwan); and eleventh grade, age 17 (i.e., equivalent to second year students in senior high school in Taiwan).

The students who attended two junior high schools (i.e., Chu-Lin and Chung-Ho Junior High Schools), and six senior high schools (i.e., Taipei First Girls Senior High School, Jan-Chung Senior High School and Appendant Senior High School of Normal University, Hua-Chiang Senior High School, Hua-Chiao Senior High School, and Tai-Shan Senior High School) were selected as the target population.

Stratified sampling was employed to select 80-100 students (i.e., approximately 2 or 3 sections of classes) from each of the 6 senior high schools. Questionnaire were administered by 650 students. However, only 591 participants completed both of the questionnaires (i.e., the Chinese Rosenberg Self-Esteem Scale and the Chinese Self-Description Questionnaire-II) and provided useful data.

Of the total sample ($N = 591$) who returned the questionnaires, 53.74% ($n = 316$) were males, and 46.26% ($n = 275$) were females. For grade level, 36.56% of the students were in the ninth grade, 29.93% in the tenth grade, and 33.50% in the eleventh grade.

Students participated voluntarily in this research, and no reward was offered for participation, nor was there any penalty for not participating. Confidentiality was ensured by having all participants complete the questionnaires anonymously.

Research Instruments

The instruments that were used in this study included a Demographic Survey, the Chinese Rosenberg Self-Esteem Scale (CRSES), and the Chinese Self-Description Questionnaire-II (CSDQ-II). Originally, the CRSES was constructed by Rosenberg (1965) as an instrument to measure adolescents' global self-esteem, and the CSDQ-II was constructed by Marsh (1990b) to

measure multifaceted self-concepts of adolescents. These two inventories were translated into Chinese by Lin (1990) and Hau (1996), respectively. Exploratory factor analyses were used to access the validity for the CRSES and CSDQ-II by the researcher. Two factors, positive and negative items, were conducted in the CRSES. Nine factors were extracted in the CSDQ-II, they were: Math/School factor, Verbal factor, Physical Appearance factor, Peer Relations factor, Emotion factor, Physical Ability factor, Parent Relations factor, Negative General Self factor, and Honest factor.

Procedure

Two questionnaires, the CRSES (Lin, 1990) and Chinese SDQ-II (Hau, 1996), as well as the Demographic Survey were administered in group (i.e., class) format. The teacher of each class or this researcher explained the purpose of the study and answered any questions from students. All participants were informed of their rights of confidentiality before they responded to the questionnaires. The teachers encouraged the students to answer every question carefully and informed them that all responses would be anonymous; names were not written on the materials. There was no time limit for students to answer the questionnaires; it took approximately 25 minutes for them to complete all questions. Finally, the participants were reminded to check whether they had answered every question.

Data Designs and Analyses

The data from the collected questionnaires were held anonymous and carefully examined to determine whether the completed response forms were usable for scoring and verification. The data obtained through standard measuring were treated sequentially as follows.

Correlations were used to examine the relationships between adolescents' global self-esteem, including positive and negative components, and the nine factors of domain-specific self-concepts; the multiple regression analysis was conducted to explore what dimensions of self-concepts could predict adolescents' global self-esteem. In addition, grade and gender differences in this model were conducted separately; nine 2 (gender) x 3 (grade) analyses of variance (ANOVAS) designs were conducted to explore gender and grade differences in the specific domains of self-concept. A post hoc comparison was employed to examine the differences in the specific domains of self-concept among the grades.

RESULTS

The Relationships Between Domain-Specific Self-Concepts and Global Self-Esteem

The correlation coefficient was utilized to examine the relationships between the adolescents' perceived domain-specific self-concepts and global self-esteem. The appearance of the correlation matrix revealed that the variables of the total CRSES scores, the positive CRSES scores, and the

negative CRSES scores were significantly related positively with all nine SDQ-II factors and the total CSDQ-II scores.

In Table 1, the values of the correlation coefficient of the total CRSES, the positive CRSES, and the negative CRSES with the factor of the Negative General Self were very highly correlated ($r = .80, .72, \text{ and } .73$). Also, the three CRSES scores provided a moderately high correlation with the remaining eight factors of the CSDQ-II and high correlation with the total scores of the CSDQ-II ($r = .76$), but there was a weak correlation with the factor of Honesty ($r = .21, .19, \text{ and } .18$). In addition, the Math/School factor and the Physical Appearance factor showed higher correlations with the CRSES factors than the other factors, which indicated that the Math/School factor and the

Table 1 Correlation Coefficients of the Nine CSDQ-II Factors and the CRSES Scores

Factor	Total	Positive	Negative
The Math/School Factor	.51**	.48**	.46**
The Verbal Factor	.43**	.46**	.32**
The Physical Appearance Factor	.49**	.46**	.43**
The Peer Relations Factor	.45**	.43**	.39**
The Emotion Factor	.45**	.37**	.46**
The Parent Relations Factor	.36**	.32**	.33**
The Physical Ability Factor	.28**	.31**	.20**
The Negative General Self Factor	.80**	.72**	.73**
The Honesty Factor	.21**	.19**	.18**
The Total CSDQ-II Scores	.76**	.73**	.66**

** $p < .001$

Physical Appearance factor were highly correlated to the adolescents' global self-esteem. However, the factor of Emotion correlated higher in the negative CRSES ($r = .46$) than in the positive CRSES ($r = .37$).

Three simultaneous multiple regression analyses (Cohen & Cohen, 1978) were conducted to examine the unique contribution of the domain specific self-concepts in the prediction of global self-esteem with all adolescents and by gender and grade differences in the current study (Research Question 1). The scores on the nine factors of the CSDQ-II served as the independent variables, while the scores on the CRSES served as the dependent variables.

It was supposed that the factors in the CSDQ-II were independent from each other after an orthogonal rotation in the factor analysis. However, as shown in Table 2, the zero-order correlations ($r = .26 - .50$.) showed that the factor of Negative General Self was correlated higher with the remaining eight factors than the other intercorrelations between factors in this scale, which indicated the Negative General Self scale could be applied to each specific facet of the self. In order to reduce multicollinearity, the Negative General Self factor was eliminated in the model of the multiple regression analysis in this study.

Table 2 Intercorrelations Between Nine Factors of the CSDQ-II

Factor	I	II	III	IV	V	VI	VII	VIII	IX
I Math/School	-	.23**	.27**	.28**	.23**	.24**	.28**	.50**	.13**
II Verbal		-	.24**	.22**	.12**	.14**	.14**	.40**	.11**
III Appearance			-	.53**	.28**	.30**	.19**	.46**	.06
IV Peer Relation				-	.38**	.26**	.24**	.45**	.21**
V Emotion					-	.23**	.26**	.50**	.10*
VI Parent Relations						-	.08*	.26**	.05
VII Physical Ability							-	.38**	.39**
VIII Negative General Self								-	.20**
IX Honesty									-

Note : Correlations based on N = 591.

As displayed in Table 3, Factors I (Math/School), II (Verbal), III (Physical Appearance), IV (Peer Relations), V (Emotion), and VII (Parent Relations) of the CSDQ-II were the six predictors that made a significant contribution to the global self-esteem (CRSES). According to the standardized Beta weights of these eight predictors in Table 3, the Math/School factor explained most of the variance, followed by the Verbal factor, the Emotion factor, the Physical Appearance factor, the Parent Relations factor, and the Peer Relations factor.

Table 3 Summary of the Multiple Regression Analysis of the CRSES on the Subscales of the CSDQ-II for All Adolescents (N = 591)

Predictor	Beta	t	p
Math/School	.28	9.18	.000
Verbal	.25	8.46	.000
Physical Appearance	.22	6.52	.000
Peer Relations	.07	2.00	.046
Emotio	.2	7.47	.000
Physical Ability	.03	0.97	.334
Parent Relations	.10	3.22	.001
Honesty	.05	1.64	.101

Note : Overall F (8, 590) = 89.67, $p < .001$; $R^2 = .55$

Gender and Grade Differences in the Prediction of Global Self-Esteem

All the factors with the exception of Peer Relations and Physical Ability made a significant contribution in the prediction of ninth grade adolescents' global self-esteem at the significance level of .05. The standardized Beta values indicated that the Math/School factor appeared to be the best predictor of global self-esteem, followed by the factors of Physical Appearance, Emotion,

Parent Relations, and Honesty.

Factor I (Math/School), Factor II (Verbal), Factor III (Physical Appearance), Factor IV (Peer Relations), and Factor V (Emotion) of the CSDQ-II were the five predictors at the significant level on global self-esteem (i.e., the CRSES) for the tenth grade students. An examination of the standardized Beta values revealed that the Math/School factor explained most of the variance, followed by the factors of Verbal, Physical Appearance, Peer Relations, and Emotion.

Five self-concept factors predicted the eleventh grade students' global self-esteem on the CRSES. They were Factor I (Math/School), Factor II (Verbal), Factor III (Physical Appearance), Factor IV (Peer Relation), and Factor V (Emotion) of the CSDQ-II. According to the standardized Beta values, the Verbal factor explained most of the variance, followed by the Emotion factor, the Math/School factor, Physical Appearance, and the Peer Relations factor. The Honesty factor was the least influential variable that entered into the equation.

Factor I (Math/School), Factor II (Verbal), Factor III (Physical Appearance), and Factor V (Emotion) were the four predictors at the significance level of .001 on global self-esteem (i.e., the CRSES) for male adolescents. The standardized Beta weights suggested that the Math/School factor was the best predictor, followed by the Verbal factor, the Emotion factor, and the Physical Appearance factor.

It appears that Factor I (Math/School), Factor II (Verbal), Factor III (Physical Appearance), Factor V (Emotion), and Factor VII (Parent Relations) of the CSDQ-II entered the regression equation for the female adolescents. According to the standardized Beta weights, the Verbal factor explained most of the variance, followed by the Emotion factor, the Math/School factor, Physical Appearance factor, and the factor of Parent Relations. The Physical Ability factor was the least influential variable that entered into the equation.

Gender and Grade Differences in the Domain-Specific Self-Concepts

Nine 2 (gender) x 3 (grade) analyses of variance (ANOVAS) were performed to analyze the adolescents' perception of their functioning on each factor of the CSDQ-II separately (Research Question 2 and 3). Significant main gender effects were found for Math/School factor [$F(2, 590) = 12.33, p < .001$], Emotion factor [$F(2, 590) = 5.62, p < .05$], Physical Ability factor [$F(2, 590) = 11.04, p < .001$], and Honesty factor [$F(2, 590) = 9.28, p < .05$] of the CSDQ-II.

Presented in Table 4, examination of the means showed that boys had significantly greater confidence in the Math/School factor ($M = 73.34$) than girls ($M = 67.91$) and perceived themselves to be more stable in the Emotion factor ($M = 35.85$) than did girls ($M = 34.20$). The boys' scores on the Physical Ability factor ($M = 30.09$) were higher than the girls ($M = 28.15$), but the girls had significantly higher Honesty scores ($M = 37.98$) than the boys ($M = 36.16$). There were no significant differences between boys and girls in the self-concept factors of Verbal, Physical Appearance, Parent Relations, and Negative General Self.

Table 4 Means and Standard Deviation for Nine Factors of the CSDQ-II by Gender

Self-Concept Factors	Boys (n = 316)		Girls (n = 275)	
	M	SD	M	SD
Math/School	73.35	20.07	67.91	19.72
Verbal	40.72	10.59	39.90	10.15
Physical Appearance	42.54	10.63	42.21	10.71
Peer Relations	3.83	8.41	53.99	9.12
Emotion	35.85	9.58	34.20	9.56
Physical Ability	30.09	.22	28.15	8.28
Parent Relations	34.35	.69	34.70	.79
Negative General Self	22.50	5.50	21.99	5.47
Honesty	36.16	7.10	37.98	6.56

In addition, there was a significant interaction effect between grade and gender for the Peer Relations factor [$F(2, 590) = 4.91, p < .05$] (see Figure 1). The boys in the tenth grade scored higher than males in the other grades, and the girls in the ninth grade scored higher than females in other grades.

Overall, the findings of the contribution of the CSDQ-II on the adolescents' global self-esteem are listed as follows.

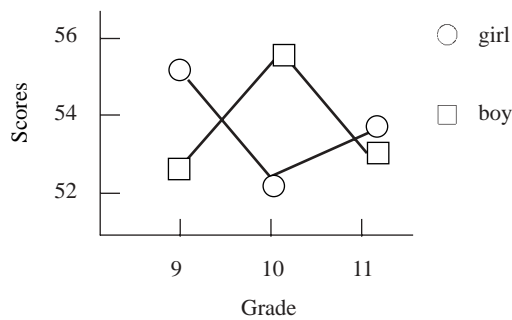


Figure 1. The Interaction Effect on the Factor of Peer Relations Between Gender and Grade

1. Academic factors (Math/School and Verbal), the Emotion factor and the Physical Appearance factor contributed the most variance to the CSDQ-II for gender and grade.

2. The factors of Parent Relations and Honesty provided less contribution to the global self-esteem in increasing grade. In other words, Parent Relations and Honesty affected adolescents' perception of their global self-esteem only in the ninth grade, but not in the tenth and eleventh grade.

3. Adolescents' perceptions of their global self-esteem were affected by peer relations in the tenth and eleventh grade but not in the ninth and tenth grade, which indicated that peer relations

became more important than parent relations for adolescents as they grew older.

4. The factor of Parent Relations predicted a higher correlation in global self-esteem with girls than with boys. Female adolescents had a higher connection with their parents than male adolescents.

DISCUSSION

The Relationships Between Domain-Specific Self-Concept and Global Self-Esteem

Little empirical research has been conducted to examine how different domains of self-concept differentially contribute to global self-esteem (Marsh, 1986). Rosenberg, Schooler, Schoenbach, and Rosenberg (1995) reported that academic self-concept, positive family relationships, the number of best friends, and physical appearance were key variables that directly affect global self-esteem. This current study, which was conducted with 591 subjects in Taiwan, demonstrated that six domain-specific self-concepts (i.e., the factors of Math/School, Emotion, Physical Appearance, Verbal, Parent Relations, and Peer Relations) in the CSDQ-II greatly contributed to the prediction of global self-esteem; in particular, the factor of Math/School contributed most. These results were similar to Western findings (Marsh, 1990b; Marsh, et al., 1988; Marsh, Parker, & Barnes, 1985; Marsh & Shavelson, 1985; Rosenberg et al., 1995), and other descriptions of the relationship between these six domains of self-concept and global self-esteem are stated as follows.

Math/School and Verbal

In the correlation matrix, the factor of Math/School correlated highly with global self-esteem, with the positive and negative components, and with the total scores, as well as the factor of Verbal in the second highest correlation with the CRSES (Lin, 1990). The results in the multiple regression analysis indicated that Math/School and Verbal self-concepts made significant contributions to prediction of global self-esteem. Also, researchers in the United States have found that academic performance was positively related to global self-esteem (Rosenberg, Schooler, & Schoenbach, 1989; Wylie, 1979), as well as the positive connection between academic self-concept and global self-esteem (Marsh, Byrne, & Shavelson, 1988; Marsh et al., 1985; Marsh & Shavelson, 1985).

Generally, education is a major area of achievement among adolescents. School performance is a particularly visible indicator of a student's worth and capability; and academic success is valued in society, especially in Chinese culture. As mentioned in the literature review, high standards of education were the most important values of students in Hong Kong and Taiwan (Cheng, 1995; Kong, Hau, & Cheng, 1998; Lin, 1997; Turner & Mo, 1984;); therefore, it was not surprising that academic self-concepts in the Chinese SDQ-II (Hau, 1996) were strongly correlated

with global self-esteem. This result was consistent with the Rosenberg et al. (1995) finding that academic self-concept had a more powerful effect on global self-esteem than the other variables.

For gender differences, the current findings supported Stevenson and Newman's (1986) findings that boys scored higher in the factor of Math/School than girls. In Taiwan, the education of all elementary and junior high school age children is compulsory, which means a free public education is provided for the first through the ninth grades. Therefore, it is only after this compulsory education that parents have to make decisions about the cost of education and make choices about whether a son or daughter is provided with further education. The expected gender preferences difference may show up at a later age. If the son fails to pass the high school entrance examination, parents may give him preference by spending whatever it takes for him to attend a cram school in order to retake the examinations in the following year. However, if the daughter in the same family fails, she is more likely to be channeled into a vocational school. Of course, this is dependent upon the funds available to the family.

Moreover, the main effect for grade was conducted in the factor of Math/School in the current study. The tenth grade adolescents scored higher on this factor than the other two grades. As mentioned earlier, the competitive entrance examination causes extreme pressure for junior and senior high school students in Taiwan. Since the ninth grade students in this study will take the entrance examination for senior high school in the following summer, most of them were concerned about their academic abilities. Also, they worried about having to go to the cram school, which is expensive, if they failed this examination.

In contrast to the ninth grade students, the tenth grade students felt relieved because they had passed the examination and entered one of the public senior high schools the previous year. Thus, these tenth grade adolescents were confident and received high scores in most of the domain-specific self-concepts in the CSDQ-II.

For the eleventh grade students, who were close to the time for taking the entrance examination for colleges, this event represents another competition experience, which caused them more pressure and anxiety than the tenth grade adolescents. Hence, more stress and anxiety were reported by the eleventh grade students. These adolescents' confidence and their self-concepts were lower than the other two groups in most domains, whether they were high or low track students.

Emotion

An examination of the correlation coefficients, pertaining to the relationship between emotion and global self-esteem, showed a significant relationship to each other (Rosenberg et al., 1989; Su, 1980). Negative global self-esteem correlated highly with emotion in this study, which was similar to the findings in Fleming and Courtney's (1984) study that self-esteem negatively correlated with anxiety and depression. On the other hand, as with similar research (Covey & Feltz, 1991; Hsieh, 1999), boys scored higher emotional stability than girls in the current study.

Some researchers have noted that boys' stability in emotion might be affected by a function of the stereotyped masculine gender role that prescribes the avoidance of self-disclosure in boys. Zeman and Shipman (1997) pointed out that boys reported that they dissembled in regard to

emotion more than girls. This finding was consistent with gender role stereotypes, which implies that masculinity is reduced when boys talk about their feelings. In contrast, the stereotyped feminine emotional display rule encourages girls to engage in girl talk (Polce-Lynch, Myers, & Kilmartin, 1998). Females who express emotions may receive more support from others because social support tends to assist females. It may be girls are less restrictive in terms of emotional expression because they have a greater facility with verbal tasks (e.g., reporting thoughts and feelings are easier for them).

The younger adolescents (i.e., ninth grade) in Taiwan had a higher stable emotion than the older adolescents in this study. One explanation for the age related decrease in emotional self-concept could be the influence of environmental factors. It appeared that students' emotional self-concept declined during the period of senior high school. Because of the different tracks for senior high schools, adolescents may experience more pressure than they did in junior high school. School labeling at the senior high school level caused adolescents to experience more pressure than in junior high school. If students enter the high track school, their parents, teachers, and themselves establish a higher goal to pursue admission to the university.

Physical Appearance

Harter (1999) noted that physical appearance correlated most highly with global self-worth (i.e., from .52-.80), but this finding was not consistent with the results from this current study because, here, the factor of physical appearance was correlated as the fourth highest with global self-esteem. However, cultural differences may explain the disparity in the results. Crystal, Watanabe, Weinfurt, and Wu (1998) revealed that a higher proportion of U.S. adolescents reported human differences in evaluation domains, such as appearance and attractiveness; however, most of the Asian adolescents, in their study, valued high academic achievement and cognitive ability.

From this comparison of these two cultures (Crystal et al., 1998), it appears that members of the Chinese culture emphasize greatly the importance of academic achievement, which has a positive relationships with personal success, and the adolescents in Taiwan emphasize academic performances more than adolescents in other cultures. In other words, successful academic achievement will supplement the inferiority of physical appearance and will bring benefits in the future. Also, it was demonstrated in the interview results that none of the respondents reported that they liked themselves because of physical appearance.

Peer Relations

Some researchers have found that relationships with peers (Berndt & Keefe, 1998; Cheng & Chang, 1994; Chu, 1981; McClun & Merrell, 1998) were highly correlated to global self-esteem. Berndt and Keefe revealed that students, who described their friendships as having more positive features, perceived their global self-worth more positively during adolescence. Specifically, in this study, the older adolescents reported a higher correlation with peers than did the younger groups, similar to the results found by Marsh, Smith, Marsh, and Owens (1988) and Hattie (1992).

In addition, Chinese adolescents are not encouraged to make friends with opposite sex peers during junior and senior high school. Most parents and teachers believe that adolescents will pay

less attention to their academic performance if they date friends of the opposite sex. That may be the reason that there was no distinction in the peer relations in this study.

There were no gender and grade main effects in the factor of peer relations, but an interaction effect by gender and grade was found in this study. The girls in the ninth grade and the boys in the tenth grade scored highly on the factor of peer relations. This may be due to the fact that, in the ninth grade, girls have had ongoing, intimate relationships with their classmates for 3 years. When girls enter senior high school, they have to make new friends and build new relationships based on environmental differences; however, after they adjust to the new environment, the development of peer relationships increases quickly. In contrast, the intimacy of boys' peer relations is more related to gender role identity, that is, boys who identify strongly with the traditional masculine role are less likely to develop strong peer relations (Jones & Dembo, 1989).

Parent Relations

A number of researchers have demonstrated that the relationships with parents and global self-esteem were highly correlated (Ho, 1992; Huang, 1997; Ju, 1996; Mcclun & Merrell, 1998; Wu, 1998). Adolescents who perceived their parents as having an authoritative parenting style had a more positive self-concept than those who perceived their parents as having an authoritarian orientation (Mcclun & Merrell). Although parenting styles were not addressed in the present study, other findings for Taiwanese students showed a similarity with Western results. The factor of parent relations was highly correlated with global self-esteem (Marsh et al., 1988), and younger adolescents scored higher in the factor of parent relations than did the older ones (Hattie, 1992).

For most of the CSDQ scales, gender effects were statistically significant; some favored girls, but more favored boys, the same as in Marsh's (1989) study. As expected, a significant gender effect on the specific domains of self-concepts was found in this study, which indicated that boys had higher scores in most of the domain-specific self-concepts (i.e., the factors of Math/School, Emotion, and Physical Ability) than girls. Girls scored significantly higher than boys only for the factor of Honesty. The same results were found in the research conducted in Australia (Marsh, 1990b) and Shanghai (Cheng, Zhu, Ye, & Tang, 1997). Conclusively, the direction of gender difference in specific domains of self-concept tended to be consistent with traditional gender stereotypes (Dusek & Flaherty, 1981; Wylie, 1979) and, in spite of cultural differences, boys had higher self-concepts in masculinity and achievement than girls, but lower self-concepts in congeniality.

RECOMMENDATIONS FOR FUTURE RESEARCH

Although the Chinese SDQ-II (Hau, 1996) may have relatively high validity and reliability in the measurement of multidimensional self-concepts in these adolescents in Taiwan, research with more participants from different areas in Taiwan is needed to further determine the validity and reliability and establish norms for this instrument. Many research studies have been conducted in

the area of self-esteem, but few researchers have reported specific definitions of high and low self-esteem. Participants' responses about high and low self-esteem were self-reports; therefore, the findings may be ambiguous.

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臺灣青少年多重向度自我概念與 整體自尊關係之比較研究

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摘 要

本研究主要目的在探討青少年整體自尊和多重向度自我概念之關聯性。作者使用中文版的「自我概念量表」(Self-Description Questionnaire-II)及「羅氏自重量表」(Rosenberg Self-Esteem Scale)為測量工具，收集台灣地區591名國、高中學生的作答結果，並採用相關(correlation)、多變項迴歸分析(multiple regression analysis)、及變異數分析(ANOVA)等統計分析研究資料。主要的發現如下：(1)自我概念量表各因素和羅氏自重量表的得分有顯著相關；(2)學科/數學、語言、外表、情緒穩定性、親子關係、和同儕關係等六項多重向度自我概念可以明顯預測整體自尊；(3)青少年因年齡及性別之不同，其知覺到的多重向度自我概念也有所差異；(4)男女生因年齡不同在同儕關係自我概念中呈現顯著的交互作用，而在其他多重向度自我概念及整體自尊上則無。

上述的研究發現有助於教育工作者、學校諮商人員、和教育研究者思考並注重各個向度的自我概念對青少年整體自尊發展的影響。作者建議未來對可針對多重向度自我概念作進一步的研究，例如發展適用於台灣地區青少年多重向度自我概念的測量工具，以及設計提昇青少年自尊的教育課程等。

關鍵詞：自尊、多重向度自我概念、性別、年齡、自我概念量表

