

A Model For The International Investigation Of Adolescents' Self-Concept

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Research increasingly indicate that a better understanding of the variations in students' school-related outcomes can only be achieved by examining their affective characteristics. Wang, Haertel, and Walber (1993, p. 263) observed that "... affective variables, long acknowledged as important by classroom teachers, must be considered as key attributes which are necessary for developing independent, self-regulating learners". Similarly, Alexander, Entwisle, and Horsey (1997, p. 98) maintained that "...the family guides children's development throughout their schooling, and children's affective orientations should become more influential as their academic sense of self crystallizes".

Investigations have indeed shown that self-concept is one of the most significant affective characteristics associated with measures of students' school outcomes (e.g., March & Yeung, 1997a, 1997b, McInerney, Roche, McInerney, & Marsh, 1997). Marsh, Perry, Horsley, and Roche (1995, p. 71) defined self-concept as "...a person's self-perceptions, formed through experience with interpretations of ones environment. These self-perceptions are specially influenced by evaluations of significant others, reinforcements, and attributions of one's own behaviour and accomplishments". Few investigations have, however, examined the relationships between

adolescents' perceptions of environments, attributions of responsibility, and measures of self-concept. In addition, analyses of relationships between family environments and self-concept have been limited by the use of restricted family measures. Rumberger (1995, p. 587) writes that "Most empirical research on families has focused on the structural characteristics of families. ... There is considerably less research that has attempted to identify the underlying *processes* through which family background influences school outcomes".

The purpose of this study was to examine relationships between family structural characteristics, perceptions of family processes, attributions of responsibility and adolescents' self-concept.

A MODERATION-MEDIATION MODEL

For the study, a moderation-mediation model was constructed from a theoretical orientation suggested by Bronfenbrenner and Ceci (1994). They claimed that to explain variations in developmental outcomes it was necessary to understand relationships among distal family contexts, proximal family settings, individual characteristics and measures of those outcomes. The following was proposed:

The form, power, content, and directions of the proximal processes affecting development vary substantially as a joint function of the characteristics of the developing person, of the environment – both immediate and more remote – in which the processes are taking place, and the nature of the developmental

outcome under consideration (Bronfenbrenner & Ceci, 1994, p. 572).

In addition, Ceci, Rosenblum, De Bruyn, and Lee (1997, p. 311) state that “The efficacy of a proximal process is determined to a large degree by the distal environmental resources. ... Proximal processes are the engines that actually drive the outcome but only if the distal resources can be imported into the process to make it effective”. The theoretical framework also indicates the need to explore moderation and mediation relationships among distal contexts, proximal settings, individual characteristics and adolescents’ outcomes.

In the moderation-mediation model developed for the study, family environment was defined in relation to conceptual orientations proposed by Coleman (1990, 1997) and Darling and Steinberg (1993). According to Coleman (1997) family influences are separable into components such as human and social capital. Human capital provides parents with the opportunity of creating supportive proximal learning settings, and it can be measured by indicators of family social status. Caspi, Entner Wright, Moffitt, and Solva (1998, p. 427) define human capital as “the resources, qualifications, skills and knowledge that are available to and acquired by individuals”. In contrast, social capital is generated from the strength of relationships between parents and children that, for example, provide children with access to their parents’ human capital.

In a further conceptual orientation relating to family social capital, Darling and Steinberg (1993, p. 488) proposed that family social capital might be

influenced by a distal context dimension in the form of parents' expectations. They claimed that to understand relations among distal family contexts, family social capital and adolescents' outcomes, "one must disentangle three different aspects of parenting: the goals toward which socialization is directed, the parenting practices used by parents to help children reach those goals, and parenting style".

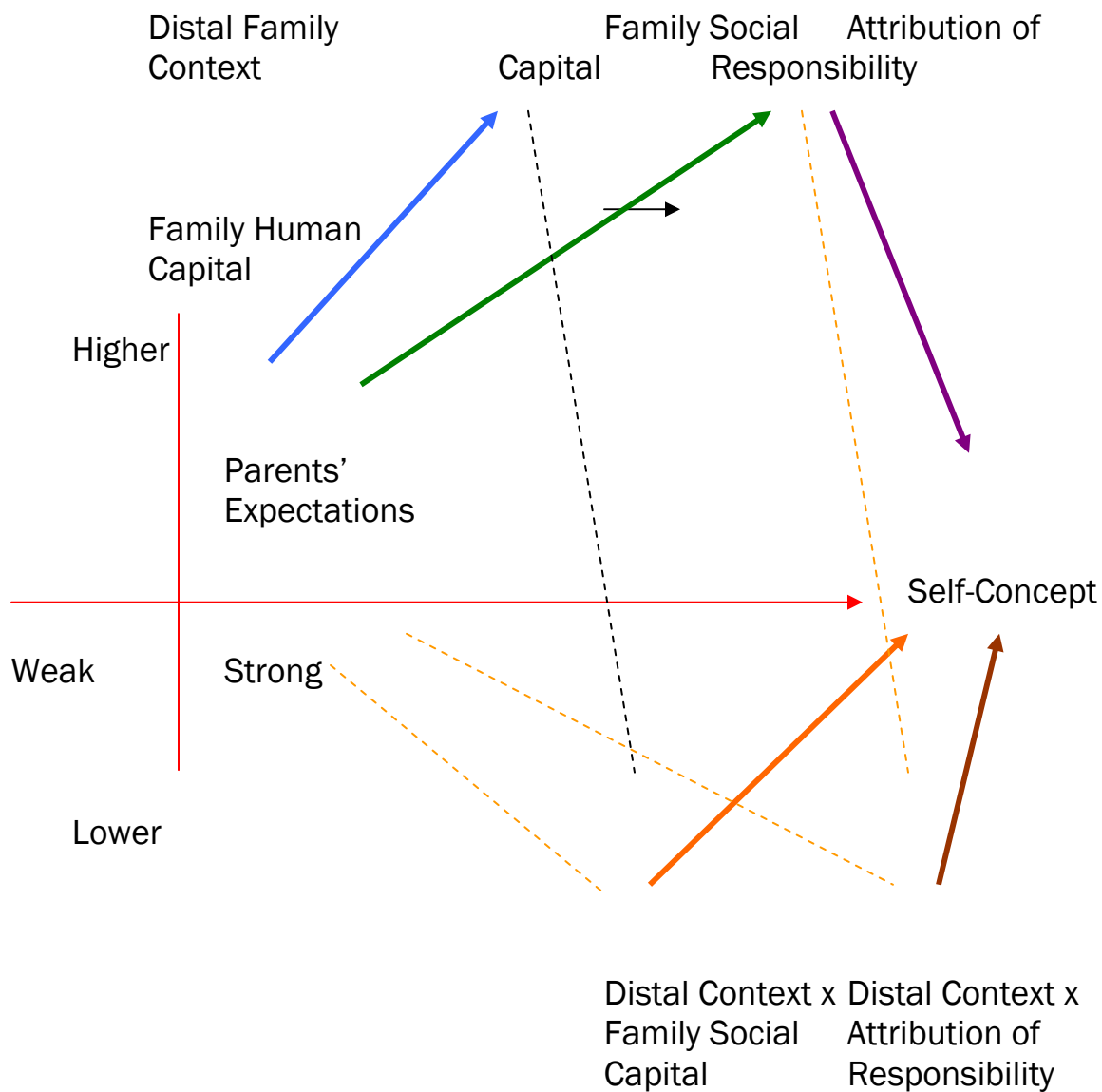
A combination of the conceptual orientations of Coleman (1997) and of Darling and Steinberg (1993) suggests that distal family context might be defined by the dimensions of family human capital and parents' expectations. There are differences, however, in the nature of the relationships between family social status measures and parents' expectations for their children. Alexander, Entwisle, and Bedinger (1994) indicate, for example, that in lower social-status groups, parents often have particularly high expectations for their children but they may be unable to activate the necessary social capital to realize their expectations. In contrast, many middle social-status parents may express relatively moderate expectations for their children which they consider to be realistic and achievable (Hao & Bonstead-Bruns, 1998). In this study, distal family context was therefore defined conjointly by family human capital and parents' expectations for their children.

The moderation-mediation model that was examined is shown in Figure 1. In the model, the depiction of the relations is based on a presentation suggested by Keeves (1997). Distal family context, family social capital and attribution of responsibility have direct associations with self-concept. The relationship between distal family context and self-concept is also shown as operating indirectly through family social capital and attribution of responsibility, while

family social capital has an indirect association with self-concept through students' attribution of responsibility (see Hoover-Dempsey & Sandler, 1997). These indirect relations suggest the potential mediating effects of the intervening variables. In addition, the model indicates the presence of joint effects in which distal family context moderates the relations between family social capital, attribution of responsibility and self-concept. The moderated effects are carried by statistical interactions and they are represented by the new variables formed by the product (shown by broken lines in figure 1) of distal family context and family social capital and the attribution of responsibility, respectively.

Figure 1

Moderation-Mediation Model For Relationships Among Distal Family Context, Family Social Capital, Attribution Of Responsibility And Adolescents' Self-Concept



In the analysis, the relationships in the model were examined separately for females and males since research has indicated moderate but significant gender-related differences in associations between family measures and

affective characteristics (Marjoribanks, 1994; Marjoribanks & Mboya, 1997). The following hypotheses were stated:

1. Distal family context moderates relationships between family social capital, attribution of responsibility and self-concept.
2. Family social capital and attribution of responsibility mediate the association between distal family context and self-concept.
3. There are gender-related variations in the relations between the predictor and outcome measures.

METHOD

SAMPLE

Relationships in the moderation-mediation model were examined using data collected from 212 female and 200 male students (Mean age = 18.2 years, SD = 1.3) from three high schools in the Eastern Cape Province, South Africa. In normal classroom settings the students completed schedules that provided information on their distal family context, family social capital, attribution of responsibility and self-concept.

MEASURES

Human Capital: Students indicated on six-point scales their parents' educational attainment (1 = no schooling; 6 = college or university education) and occupations (1 = unemployed; 6 = professional). Based on principal components analyses of the responses, family human capital was defined by an equally weighted composite of fathers' and mothers' educational attainment and occupations.

Parents' Expectations: A schedule of eight items, in five-point response (1 = strongly disagree; 5 = strongly agree), was used to measure the parents' expectations for their children. Examples of items in this category: 'When I leave school my parents want me to continue with my studies' and 'My parents believe that my education is very important'. The scale had an alpha reliability estimate of .76.

Family Social Capital: Hagan, MacMillan, and Wheaton (1996, p.371) observed that the "...social capital theory's focus on parent-child relations places parental involvement and support at the center of its explanation of education achievement". The students' perceptions of their family social capital was assessed according to the Perceived Parental Behaviour Inventory (PPBI), designed by Mboya (1993a) (see Appendix 1). A principal components analysis of responses generated two factor scales that were labeled parental involvement and parents' support. Parental involvement was measured by seven items formulated along the lines of: 'Most of the time my parents look at my schoolwork' and 'When I get home from school, my parents want to know about my schoolwork'. Parents' support was assessed by eight items such as: 'At home, my parents praise me for trying, even if I do not succeed' and 'My parents support me in the things that I do'. The items of the two scales were in five-point response format (1 = strongly disagree; 5 = strongly agree) and the scales had alpha reliability estimates of .74 and .77, respectively.

Attribution Of Responsibility: Weiner's (1986) attributional theory proposes that adolescents attempt to relate their school performances to attributions such as effort, ability and luck. According to this theory attributions can be

classified, in part, along a dimension that locates the cause of a performance within a person (internal) or outside a person (external). In this study adolescents' attribution of responsibility was measured by a scale of 18 items which assesses the extent to which individuals accept responsibility for their school performance. The items are in Yes-No format with five-point scales to gauge the strength of the affirmative or negative reply (Clifford, 1976; Stipek & Weisz, 1981). High scores indicated that adolescents attributed their school performance to internal causes, whereas a low score suggested external influences.

Self-Concept: A schedule constructed by Mboya (1993b), *The Self-Description Inventory (SDI)*, was used to measure the adolescents' self-concept (see Appendix 2). The schedule consisted of 50 Likert-type items organized into sub-scales to gauge the multidimensional nature of self-concept. When a principal components analysis was done to examine the factorial structure of the responses, two factors were generated. The first factor was defined by sub-scales that assessed adolescents' interest in and enjoyment of school, their relations with peers and their relations with family. In contrast, the second factor was defined by students' perceptions of their physical abilities, physical appearance, emotional stability and health. These two factors were labeled *social self-concept* and *presentation self-concept* (Hattie, Marsh, Neill & Richards, 1997). The alpha reliabilities of the two self-concept dimensions were .84 and .82, respectively.

RESULTS

For the analysis, the adolescents were classified into four distal family contexts defined by the median split of scores on the measures of family human capital

and parents' expectations. The distal family contexts were labeled as higher human capital/strong parents' expectations (55 females, 53 males), higher human capital expectations (52 females, 53 males), lower human capital/strong parents expectations (51 females, 53 males) and lower human capital/weak parents' expectations (54 females, 47 males).

PATTERNS OF MEAN SCORES

Table 1 presents the mean scores for the measures of family social capital, attribution of responsibility and self-concept for females and males in each family context. The scores have been standardized with means of 50 and standard deviations of 10 – to make it simpler to detect possible gender and family-context patterns in the scores. When family-context membership was included in multiple-regression models as a set of mutually exclusive dummy variables, the findings indicated that family context has significant associations with each of the measures in the moderation-mediation model (Rs ranged from .17 to .45).

Table 1
Standardised Mean Scores In Each Family Context For Females And Males And
Multiple Correlations Between Family Context And Variables

Variable	Higher Human Capital				Lower Human Capital				Multiple R, with Family Context	
	Strong Expectations		Weak Expectations		Strong Expectations		Weak Expectations		Females	Males
	Females	Males	Females	Males	Females	Males	Females	Males		
Parental Involvement	52.36	56.40	46.29	47.84	52.38	54.48	46.10	45.52	0.31***	0.44***
Parents' Support	54.40	56.76	46.89	46.61	51.54	53.07	43.80	46.14	0.43***	0.45***
Internal Attribution	52.08	53.77	49.07	46.52	49.82	53.24	48.00	48.91	0.17*	0.30**
Social Self-Concept	53.09	55.48	48.27	45.59	52.59	54.33	45.65	47.07	0.31***	0.43***
Presentation Self-Concept	51.62	55.65	48.57	44.66	49.81	52.80	47.62	48.50	0.17*	0.40***

* p < 0.05, **p < 0.01, ***p < 0.001

When the significance of differences in mean scores were examined using t tests, the adolescents from family contexts defined by strong parents' expectations perceived higher parental involvement, more parent support and had more positive social self-concept scores than did students from family contexts defined by weak parent expectations. Males in strong parent-expectation families were characterized by higher internal attribution of responsibility and a more positive presentation self-concept than were males in weak parent-expectation contexts. In contrast, females from higher human capital/strong parent expectation families were characterized by higher internal attribution of responsibility and more positive presentation self-concept than were females in weak parent-expectation families. Furthermore,

within the higher human capital/strong expectation family context, males perceived stronger parental involvement and had a more positive presentation self-concept than did female adolescents. That is, the initial findings revealed family-context variations and differences between females and males in the patterns for mean scores of the variables in the moderation-mediation model.

MODERATION-MEDIATION EFFECTS

Multistage regression analysis was used to investigate moderation and mediation effects, with variables being added to regression equations in three stages. First, relations between the family-context categories and self-concept were examined. In the second stage, the regression models included the measures of family social capital and the interaction between family context and social capital. The full regression models, in the third stage, included the measures of attribution of responsibility and the interaction between family context and attributions. Aiken and West (1991, pp. 32 – 33) observed that “...considerable multicollinearity can be introduced into a regression equation with an interaction when the variables are not centered ... Centering variables will often help minimize these problems”. In the analyses, therefore, deviation scores were used in the regression equations, and in the presentation of the findings only those interactions that were significant were shown.

The regression models in Table 2 show the relationships for adolescents’ social self-concept. In the regression equations, family context was represented by a set of dummy variables. The categories omitted were higher human capital and strong parent expectations. The results for females revealed that family context had a moderate association with social self-concept ($R = 0.314$). In model 2, the family social capital dimensions and an

interaction term had significant associations with social self-concept scores. In addition, when family social capital and the interaction term were taken into account, family context differences in females' social self-concept became non-significant. Thus distal family context moderated the relationships between family social capital and social self-concept while the intervening variables mediated the relations between family context and social self-concept. In model 3, females' attribution of responsibility had a significant association with social self-concept and it mediated the relation between parental involvement and social self-concept scores.

Table 2
Understandised Regression Coefficients For Relations Among
Distal Family Context, Family Social Capital, Attribution
Of Responsibility And Social Self-Concept

Predictor Variables	Females			Males		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Higher Human Capital / Weak Expectations (A)	-4.591**	-1.852	-1.008	-9.892***	-5.476**	-3.867*
Lower Human Capital / Strong expectations	-0.478	0.247	0.024	-1.146	0.192	0.320
Lower Human Capital / Weak Expectations	-7.088***	-2.545	-1.008	-8.412***	-3.405	-2.539
Parental Involvement		0.262*	0.172		0.398**	0.277
Parents' Support		0.655***	0.726***		0.640***	0.697***
A x Parental Involvement		0.545*	0.530*			
Internal Attribution			0.389***			0.379***
Multiple R	0.314***	0.481***	0.575***	0.427***	0.556***	0.605***
100 R ²	9.84	23.18	33.02	18.25	30.90	36.63

*p , 0.05, **p , 0.01, ***p , 0.001

For males, family context had a moderate association with social self-concept (R = 0.427). In model 2, the regression coefficients revealed that the significant relationships between distal family context and social self-concept scores were mediated or partially mediated by the males' perceptions of their family social capital. Males' attribution of responsibility had a significant association with social self-concept scores, and it mediated the relation between parental involvement and social self-concept. The regression coefficients in model 3 also indicated that when males' attribution of responsibility was taken into account, the remaining significant association between family context and social self-concept was attenuated but remained

significant. Overall, the full regression equations revealed that the variables in the moderation-mediation model were related to moderate variances in females' ($R^2 = 33.02\%$) and males' ($R^2 = 36.63\%$) social self-concept.

In Table 3, the regression equations show the relationships for adolescents' presentation self-concept. The findings for females indicated that distal family context had a moderate association with the self-concept scores ($R = .17$).

Table 3
Understandised Regression Coefficients For Relations Among
Distal Family Context, Family Social Capital, Attribution
Of Responsibility And Presentation Self-Concept

Predictor Variables	Females			Males		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Higher Human Capital / Weak Expectations (A)	-2.926	0.600	0.422	-8.980***	-6.567***	-6.109***
Lower Human Capital / Strong Expectations	-1.750	-1.014	-1.175	-2.144	-0.998	-0.909
Lower Human Capital / Weak Expectations	-3.370*	1.007	0.760	-5.754***	-3.292	-3.030
Parental Involvement		0.500***	0.517***		0.067	0.092
Parents' Support		0.669***	0.654***		0.624***	0.634***
A x Parental Involvement					0.835*	0.791*
A x Parents' Support					1.524***	-1.495***
Internal Attribution			0.080			0.105
Multiple R	0.170	0.426***	0.431***	0.403***	0.512***	0.518***
100 R2	2.89	18.17	18.59	16.23	26.19	26.80

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The family social capital dimensions mediated the relations between family context and presentation self-concept whereas internal attribution of

responsibility was not related to females' presentation self-concept. In contrast, distal family context had a moderate association with males' presentation self-concept ($R = .413$). In model 2, the results revealed significant relations involving parents' support and a number of interaction terms. That is, distal family context moderated the relationships between family social context and presentation self-concept while family social capital mediated or partially mediated the relationship between family social capital and presentation self-concept. Overall, the full regression equations indicated that the variables in the moderation-mediation model combined to be associated with moderate variances in females' ($R^2 = 18.9\%$) and males' ($R^2 = 26.80\%$) presentation self-concept scores.

REGRESSION SURFACE ANALYSIS

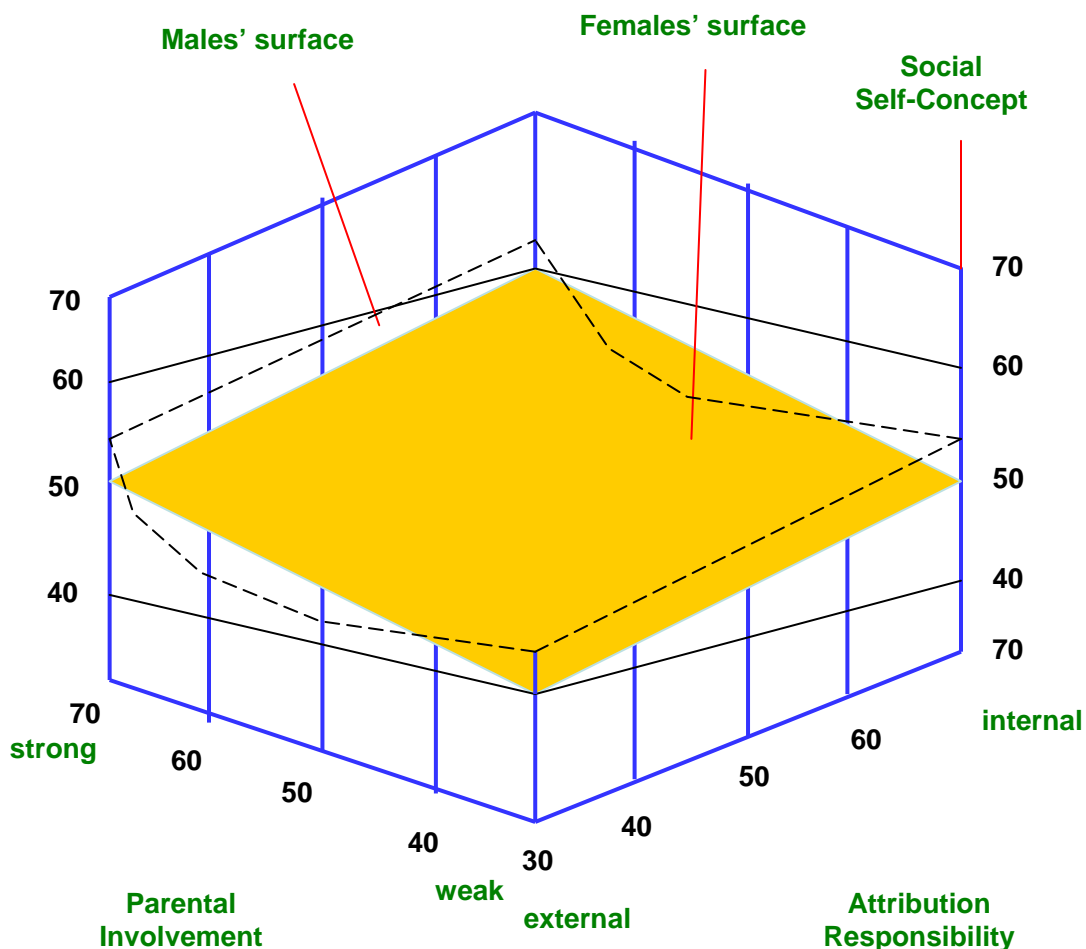
Eckernrode, Rowe, Laird, and Brathwaite (1995) suggested that once there was evidence of moderation or mediation among a set of relations, then the nature of the associations among predictors and outcomes should be explored further. They pointed out the need to examine possible curvilinear relationships. In the present analysis, therefore, linear and curvilinear relations among family social capital, internal attribution of responsibility and self-concept were investigated by plotting regression surfaces. The surfaces were generated from regression models of the form $Z = aX + bY + cXY + dX^2 + eY^2 + \text{constant}$, where Z, X, and Y represented measures of self-concept, family social capital and attribution of responsibility. While it would have been preferable to plot surfaces within each family context, the size of the samples in those contexts was too limited for multivariate analyses. The regressions were therefore conducted for the total sample. In addition, because of space limitations, it was not possible to present the tables of

regression equations or to portray all the surfaces that were constructed. Instead, surfaces that reflected the nature of the associations between family social capital and self-concept at varying levels of attribution of responsibility were chosen and presented.

In Figure 2, the surfaces show the regression-fitted relations among the categories of parental involvement, attribution of responsibility and social self-concept. Scores for the surfaces were standardized with means of 50 and standard deviations of 10. For males, the surface shows that parental involvement and attribution of responsibility had significant linear associations with social self-concept. At each parental involvement level, for example, as the attribution scores changed across the range from external to internal, there were increments in social self-concept of approximately 10 regression-fitted points.

Figure 2

Fitted Social Self-Concept Scores In Relation To Parental Involvement And Attribution Of Responsibility



The possible complexity of the relations is shown in the females' regression surface which indicated that parental involvement acted as a threshold variable. That is, until about mean involvement levels were attained, parental involvement was not related to social self-concept. After that threshold level, however, sizable increments in self-concept scores were related to successive increases in parental involvement. Such findings support the claim that if moderation-mediation associations are present in data analyses, then further

investigations should be undertaken of the possible complexity of those relations.

DISCUSSION

The present study suggests that when distal family context is defined by family human capital and parent expectations, the following general propositions can be made: (a) that distal family context moderates some relationships between family social capital and adolescents' self-concept, (b) that the associations between distal family context and adolescents' self-concept are mediated, or partially mediated, by family social capital and attribution of responsibility, (c) that there are gender-related differences in the nature of the linear and curvilinear relations among distal family context, family social capital, attribution of responsibility and self-concept. The investigation therefore provided tentative support for the moderation-mediation model that was developed for the study.

It has been suggested that the conventional measures of socio-economic status no longer capture the complexities of family background in postmodern society (see Grusky & Sorensen, 1998). Reay (1998, p. 272) has claimed, for example, that "Class is a complicated mixture of the material, the discursive, psychological predispositions and sociological dispositions". The enduring impact of the measure of distal family context in some relations with self-concept established in this study, suggests that future educational research might consider family background as being defined conjointly by family human capital and parent expectations. Also, in further analyses of the moderation-mediation model, more comprehensive social capital measures should be included. Stanton-Salazar (1997) argued that family social capital needs to be considered in relation to the wider social networks available to adolescents. That is, in an elaborated model, social capital might be expanded to include adolescents' interactions with a network of institutional agents, such as

community leaders, counselors, teachers and social workers, as well as parents and other family members.

If the findings from this study were replicated in other investigations, they would indicate some of the potential challenges that confront parents and teachers as they attempt to enhance children's self-concept by altering learning contexts. In this study, for example, the curvilinear nature of the relation between parental involvement and social self-concept suggests that adolescents' perceptions of such family influences might have to be enhanced substantially if there are to be meaningful changes in affective outcomes. Also, for students with an externally oriented attribution of responsibility, family social capital is associated with low self-concept scores.

This study was limited by its cross-sectional and correlational design. Demo (1992, p. 322) observed that "...we must measure self-concept as both a structure and a process, i.e., a dynamic structure that responds to situational stimuli, incorporates new elements, rearranges, adjusts, and stabilizes temporarily before encountering new stimuli and undergoing further revisions". What is required now are longitudinal studies of the moderation-mediation model that examine the possible complexity of the relations among more elegant measures of social capital, other measures of adolescents' individual characteristics and self-concept. Only after such investigations have been completed, will it be possible to achieve a more complete understanding of the relations between family capital and self-concept and of the challenges that confront families and schools as they attempt to influence self-concept by altering adolescents' social capital.

REFERENCES

Aiken, L.S., & West, S.G. (1991). *Multiple regression: Testing and interpreting Interactions*. Newbury Park: Sage.

Alexander, K.L., Entwisle, D.R., & Bedinger, R. (1994). When expectancies work: Race and socioeconomic differences in school performance. *Social Psychology Quarterly*, 57, 283-299.

Alexander, K.L., Entwisle, D.R. & Horsey, M. (1997). From first grade forward: Early foundations of high school dropout. *Sociology of Education*, 70, 87-107.

Bronfenbrenner, U., & Ceci, S.J. (1994). Nature-nurture reconceptualization in development perspective: A bio-ecological model. *Psychological Review*, 101, 568-586.

Caspi, S.J., Entner Wright, S., Moffit, M., & Silva, J. (1998). Childhood predictors of unemployment in early adulthood. *American Sociological Review*, 63, 424-451.

Ceci, S.J., Rosenblum, T., De Bruyn, E., & Lee, D.Y. (1997). A bio-ecological model of intellectual development. In R.J. Sternber & E.L. Grigorenko (Eds.). *Intelligence, heredity, and environment* (pp. 303-322). Cambridge: Cambridge University Press.

Clifford, M.M. (1976). A revised measure of locus of control. *Child Study Journal*, 6, 85-90.

Coleman, J.S. (1990). *Foundations of social theory*. Cambridge, Massachusetts: Harvard University Press.

Coleman, J.S. (1997). Family, school and social capital. In L.J. Saha (Ed.). *International encyclopedia of the sociology of education* (pp. 623-625). Oxford: Pergamon.

Darling, N., & Steinber, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin*, 113, 487-496.

Demo, D.H. (1992). The self-concept over time: Research issues and directions. In J. Blake, & J. Hagan (Eds.). *Annual review of sociology: volume 18* (pp. 303-326). Palo Alto: Annual Reviews.

Eckenrode, J., Rowe, S., Laird, B., & Braithwaite, M. (1995). Mobility as a mediator of the effects of child maltreatment on academic performance. *Child development*, 66, 1130-1142.

Grusky, D.B., & Sorense, S.B. (1998). Can class analysis be salvaged? *American Journal of Sociology*, 103, 1187-1234.

Hagan, J., MacMillan, R., & Wheaton, B. (1996). New kid in town: Social capital and the life course effects of family migration on children. *American Sociological Review*, 61, 368-385.

Hao, L., & Bonstead-Bruns, M. (1998). Parent-child differences in educational expectations and the academic achievement of immigrant and native students. *Sociology of Education*, 71, 175-198.

Hattie, J., Marsh, H.W., Neill, M., & Richards, S. (1997). Adventure education and outward bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research*, 67, 43-87.

Hoover-Dempsey, K.V., & Sandler, H.M. (1997). Why do parents become involved in their children's education? *Review of Educational Research*, 67, 3-42.

Keeves, J.P. (1997). Trends in quantitative research methods. In L.J. Saha (Ed.). *International encyclopedia of the sociology of education* (pp. 263-275). Oxford: Pergamon.

Marjoribanks, K. (1994). Families, schools and children's learning: A study of children's learning environments. *International Journal of Educational Research*, 21, 439-555.

Marjoribanks, K., & Mboya, M.M. (1997). Family environmental correlates of students' affective characteristics: A South African study. *Educational Studies*, 23, 243-252.

Marsh, H.W., Perry, C., Horsley, C., & Roche, L. (1995). Multidimensional self-concepts of elite athletes: How do they differ from the general population? *Journal of Sport and Exercise Psychology*, 17, 70-83.

Marsh, H.W., & Yeung, A.S. (1997a). Coursework selection: Relation to academic self-concept and achievement. *American Educational Research Journal*, 34, 691-720.

Marsh, H.W., & Yeung, A.S. (1997b). Casual effects of academic self-concept on academic achievement: Structural equation models of longitudinal data. *Journal of Educational Psychology*, 89, 41-54.

Mboya, M.M. (1993a). Development and initial validation of a perceived parental behaviour inventory for African students. *Perceptual and Motor Skills*, 76, 103-1008.

Mboya, M.M. (1993b). Development and construct validity of a self-description inventory for African students. *Psychological Reports*, 72, 83-191.

McInerney, D.M., Roche, S., McInerney, P., & Marsh, H.W. (1997). Cultural perspectives on school motivation: The relevance and application of goal theory. *American Educational Research Journal*, 34, 207-236.

Reay, D. (1998). Rethinking social class: Qualitative perspectives on class and gender. *Sociology*, 32, 259-275.

Rumberger, R.W. (1995). Dropping out of middle school: A Multilevel analysis of students and schools. *American Educational Research Journal*, 32, 583-625.

Stanton-Salazar, R.D. (1997). A social capital framework for understanding the socialization of racial minority children and youths. *Harvard Educational Review, 67, 1-40.*

Stipek, D.J., & Weisz, J.R. (1981). Perceived personal control and academic achievement. *Review of Educational Research, 51, 101-137.*

Wang, M.C., Haertel, G.D., & Walberg, H.J. (1993). Toward a knowledge theory for school learning. *Review of Educational Research, 63, 249-294.*

Weiner, B. (1986). *An attributional theory of motivation and emotion.* New York: Springer-Verlag.

APPENDIX 1

PPBI
Perceived Parental Behaviour Inventory (PPBI)

ENGLISH

CONFIDENTIAL

Name: -----

Class: -----

School: -----

Teacher:-----

Age: ----- Date of Birth: ----- Date:-----

PLEASE TICK WHICHEVER APPLIES :

Male

1

Female

2

- This is a time for you to look at yourself and your parents.
- This is not a test.
- There are no right or wrong answers and everyone will have different answers.
- Please read each statement and decide your answer. There are five possible answers to each statement: "I Agree Very Much", "I Agree", "I am Not Sure", "I Disagree" and "I Disagree Very Much".
- Choose your answer to each statement and put a (✓) in the column with the answer you have chosen.

EXAMPLES

		I Agree Very Much	I Agree	I Am Not Sure	I Disagree	I Disagree Very Much	Score
1. I like my parents.	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
2. I am not happy when I am with my parents.	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2

- If you want to change an answer you have marked, you should cross out the tick and put a new tick in the area you have chosen. You should have **one** answer only for each statement.
- Please do not leave out any statements.
- If you have any questions, put up your hand.
- There is no time limit, work at your own pace.
- Please work on your own; **DO NOT TALK** to your neighbour once you have started.

		I Agree Very Much	I Agree	I Am Not Sure	I Disagree	I Disagree Very Much	Score
1. Most of the time my parents look at my schoolwork.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. My parents encourage me to stay at home.	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. My parents believe that my education is very important.	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. When I am doing my homework, my parents do not allow other things to interfere with it.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. When I get home from school my parents want to know about my schoolwork.	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. My parents encourage me to complete my schoolwork.	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. My parents discuss my progress in school with each other.	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. My parents care if I get good marks in my schoolwork.	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		I Agree Very Much	I Agree	I Am Not Sure	I Disagree	I Disagree Very Much	Score
9. My parents are satisfied with my school reports.	9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. My parents make me feel more confident in my schoolwork.	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. My parents want me to work hard at school.	11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. My parents think that I can do well at school.	12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. My parents would like me to have good marks at school.	13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. My parents think that I can continue my education after high school.	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. My parents think that it is important for me to go to school.	15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. When I leave school my parents will want me to continue with my studies.	16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. My parents support me in the things I do.	17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. My parents are concerned about my future.	18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. My parents encourage me to use my own ideas.	19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. At home my parents praise me for trying, even if I do not succeed.	20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. My parents care about me.	21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. My parents encourage me to try my own ideas and be responsible for my own actions.	22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. My parents are concerned about what I do.	23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THANK YOU FOR YOUR CO-OPERATION

APPENDIX 2

SDI
Self-Description Inventory (SDI)

ENGLISH

CONFIDENTIAL

Name: -----

Class: -----

School: -----

Teacher:-----

Age: ----- Date of Birth: ----- Date:-----

PLEASE TICK WHICHEVER APPLIES :

Male

1

Female

2

This is a time for you to look at yourself and your parents.

- This is not a test.
- There are no right or wrong answers and everyone will have different answers.
- Please read each statement and decide your answer. There are five possible answers to each statement: “I Agree Very Much”, “I Agree”, “I am Not Sure”, “I Disagree” and “I Disagree Very Much”.
- Choose your answer to each statement and put a (✓) in the column with the answer you have chosen.
- Two examples are given below:

EXAMPLES

		I Agree Very Much	I Agree	I Am Not Sure	I Disagree	I Disagree Very Much	Score
1. I love reading.	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
2. I do not like food.	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2

- If you want to change an answer you have marked, you should cross out the tick and put a new tick in the area you have chosen. You should have **one** answer only for each statement.
- Please do not leave out any statements.
- If you have any questions, put up your hand.
- There is no time limit, work at your own pace.
- Please work on your own; **DO NOT TALK** to your neighbour once you have started.

		I Agree Very Much	I Agree	I Am Not Sure	I Disagree	I Disagree Very Much	Score
1. My family understands me very well.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I am well liked by others of my age.	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I think I can do all of my classwork.	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I enjoy sports and games.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I would like to change the way I look.	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I feel that I am not well liked by others of my age.	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. It is easy for me to make friends.	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. My family does not understand me at all.	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I like the way I look.	9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I avoid sports and games when I can.	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		I Agree Very Much	I Agree	I Am Not Sure	I Disagree	I Disagree Very Much	Score
11. I love music very much.	1 1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12. My family loves me.	12	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
13. I enjoy doing work in most school subjects.	13	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
14. I do well at sports and games.	14	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
15. I do not like my family very much.	15	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
16. I do not cry easily.	16	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
17. The work I do at school is very important to me.	17	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
18. I am in good health.	18	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
19. I feel my family does not care much for me.	19	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
20. I am not good at sports and games.	20	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
21. I feel that if I can be given a chance I can be good in music.	21	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
22. I often cry.	22	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
23. I look forward to going to school each day.	23	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
24. I often cry.	24	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
25. I am a good athlete.	25	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

		I Agree Very Much	I Agree	I Am Not Sure	I Disagree	I Disagree Very Much	Score
26. I am not happy about my appearance.	26	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
27. I feel I am an important member of my family.	27	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
28. Most subjects I find very difficult to learn.	28	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
29. I am satisfied with my appearance.	29	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
30. Even if I can be given a chance I don't think I can be good in music.	30	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
31. I would not go to school if it was my choice.	31	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
32. I enjoy the time I spend with my family.	32	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
33. when music is played or when people sing I feel good.	33	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
34. I do not enjoy doing work in most school subjects.	34	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
35. I enjoy the time I spend in class.	35	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
36. I enjoy listening to people singing or playing music.	36	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
37. Not much love is shown towards me by my family.	37	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
38. I hate most school subjects.	38	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
39. If I have children of my own, I want to bring them up the way my family did with me.	39	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

		I Agree Very Much	I Agree	I Am Not Sure	I Disagree	I Disagree Very Much	Score
40. I feel guilty when I look at my body.	40	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
41. I do not get hurt when someone shouts at me.	41	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
42. Music to me does not make any difference.	42	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
43. I feel happy with the state of my health.	43	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
44. I will never raise my children the way my parents raised me.	44	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
45. I do not care about the work I do at school.	45	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
46. I care formy body to the best of my ability..	46	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
47. I get hurt easily when someone shouts at me.	47	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
48. I like my family.	48	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
49. I like most school subjects.	49	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
50. I am a leader in sports and games.	50	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

THANK YOU FOR YOUR CO-OPERATION